

No. 22-4489

IN THE UNITED STATES COURT OF APPEALS
FOR THE FOURTH COURT

UNITED STATES OF AMERICA,
Plaintiff/Appellee,

v.

OKELLO T. CHATRIE,
Defendant/Appellant.

On Appeal From the United States District Court
for the Eastern District of Virginia
Richmond Division (The Hon. M. Hannah Lauck)

JOINT APPENDIX

VOLUME 4 of 11 (pages 695 - 1070)

JESSICA D. ABER
United States Attorney

Kenneth R. Simon, Jr., Ass't U.S. Attorney
Peter S. Duffey, Ass't U.S. Attorney
Counsel for Appellee
919 East Main Street, Suite 1900
Richmond, VA 23219
(804) 819-5400

Nathan P. Judish, Senior Counsel
Computer Crime & Intel. Property Section
Criminal Division
U.S. Department of Justice

GEREMY C. KAMENS
Federal Public Defender

Laura J. Koenig
Assistant Federal Public Defender
Counsel for Appellant
701 East Broad Street, Suite 3600
Richmond, VA 23219
(804) 565-0800

Michael W. Price, Litigation Dir.
NACDL Fourth Amendment Ctr.
1660 L Street NW, 12th Floor
Washington, DC 20036

This page intentionally left blank for double-sided pagination and printing

TABLE OF CONTENTS

VOLUME 1 (pages 1 - 176)

District Court Docket Sheet (as of Jan. 17, 2023)	1
Indictment (Sept. 17, 2019, Doc. 1).....	22
Defendant’s Motion to Suppress Evidence Obtained From a “Geofence” General Warrant (Oct. 29, 2019, Doc. 29)	25
Government’s Response in Opposition to Defendant’s Motion for Suppression of Evidence Obtained Pursuant to Google Geofence Warrant (Nov. 19, 2019, Doc. 41).....	51
Defendant’s Reply to Government’s Response [to] Motion to Suppress Evidence Obtained From a “Geofence” General Warrant (Dec. 9, 2019, Doc. 48).....	76
Exh. A (First Step 2 Request to Google) (Doc. 48-1)	98
Exh. B (Second Step 2 Request to Google) (Doc. 48-2)	100
Exh. C (Third Step 2 Request to Google) (Doc. 48-3)	102
Exh. D (Transcript, <i>Commonwealth v. Anderson</i> , No. CR17-4909-00F (Va. Cir. Ct., Jan. 4, 2019)) (Doc. 48-4).....	omitted from J.A.
Government’s Notice Regarding Attachment of Google Geofence State Search Warrant to Response in Opposition to Motion to Suppress (Dec. 18, 2019, Doc. 54)	104
Affidavit for search warrant and warrant, with attachments (Doc. 54-1)	107
Brief of Amicus Curiae Google LLC in Support of Neither Party Concerning Defendant’s Motion to Suppress Evidence From a “Geofence” General Warrant (Dec. 20, 2019, Doc. 59-1)	118
United States’ Response to Amicus Curiae Brief of Google LLC (Jan. 10, 2020, Doc. 71).....	148
Defendant’s Response to Google’s Motion to File Amicus Curiae Brief in Support of Neither Party (Jan. 10, 2020, Doc. 72)	158

VOLUME 2 (pages 177 - 416)

Transcript, Discovery Motion Hearing (Jan. 21, 2020, Doc. 81; <i>see</i> Doc. 77 (court minutes)).....	177
Preliminary matters.....	179
Def't witness Spencer McInville	
Direct examination.....	193
Cross examination.....	283
Redirect examination	306
Argument by the defense	318
Argument by the government	332
Rebuttal by the defense.....	350
Court's ruling.....	355
Defendant's Supplemental Motion to Suppress Evidence Obtained From a "Geofence" General Warrant (May 22, 2020, Doc. 104).....	363
United States' Response in Opposition to Defendant's Motion for Suppression of Evidence Obtained Pursuant to Google Geofence Warrant (June 12, 2020, Doc. 109).....	393

VOLUME 3 (pages 417 - 694)

Transcript, Suppression Motion Hearing, Day 1 (evidence) (Mar. 4, 2021, Doc. 201; <i>see</i> Doc. 198 (court minutes)).....	417
Preliminary matters.....	420
Def't witness Spencer McInville	
Direct examination.....	432
Cross examination.....	542
Redirect examination	586
Def't witness Marlo McGriff	
Direct examination.....	606

Argument by the defense	1187
Argument by the government	1231
Rebuttal by the defense.....	1313
Concluding matters	1322

VOLUME 6 (pages 1327 - 1456)

Memorandum Opinion (denying suppression motion) (Mar. 3, 2022, Doc. 220).....	1327
Order (denying suppression motion) (Mar. 3, 2022, Doc. 221)	1390
Criminal Information (May 6, 2022, Doc. 224)	1391
Transcript, Change of Plea Hearing (May 9, 2022, Doc. 247; <i>see</i> Doc. 226)	1394
Plea Agreement (May 9, 2022, Doc. 228)	1428
Statement of Facts (May 9, 2022, Doc. 229)	1444
Judgment in a Criminal Case (Aug. 19, 2022, Doc. 239).....	1449
Notice of Appeal (Aug. 25, 2022, Doc. 241).....	1456

VOLUME 7 (pages 1457 - 1810) – DOCUMENT EXHIBITS

Exhibits Admitted at Discovery Motion Hearing (Jan. 21, 2020)

Def't Exh. 1: Geofence Warrant & Application (same as Doc. 54-1, minus ECF header)	<i>see</i> J.A. 107
Def't Exh. 2: Google Amicus Brief (Doc. 59-1)	<i>see</i> J.A. 118
Def't Exh. 3: PDF of Raw Data (sealed)	<i>see</i> J.A. 2093
Def't Exh. 4: Activation Video.....	omitted from J.A., available on request
Def't Exh. 5: Three Paths Video (sealed)	<i>see</i> J.A. 2139
Def't Exh. 6: First Step 2 Request to Google	1457
Def't Exh. 7: Second Step 2 Request to Google.....	1459
Def't Exh. 8: Third Step 2 Request to Google	1461

Def't Exh. 9: Step 3 Request to Google	1463
--	------

Exhibits Admitted at Suppression Motion Hearing (Mar. 4-5, 2021)

Def't Exh. 1: Geofence Warrant & Application (same as Doc. 54-1, minus ECF header)	<i>see</i> J.A. 107
Def't Exh. 2: Google Amicus Brief (Doc. 59-1)	<i>see</i> J.A. 118
Def't Exh. 3: PDF of Raw Data (sealed)	<i>see</i> J.A. 2093
Def't Exh. 5: Three Paths Video (sealed)	<i>see</i> J.A. 2139
Def't Exh. 6: Spencer McInville Report	1464
Def't Exh. 7: Spencer McInville Supplemental Report	1469
Def't Exh. 8: CSV Google Data File (.csv file)	<i>see</i> J.A. 2139
Def't Exh. 9: Unique in Crowd Study	1475
Def't Exh. 11: September 2018 Oracle Submission	1480
Def't Exh. 18: Federal Search Warrant Application & Attachments	1502
Def't Exh. 19: State Search Warrants & Attachments	1534
Def't Exh. 21: McGriff Declaration 1 (Doc. 96-1)	1551
Def't Exh. 23: McGriff Declaration 3 (Doc. 147)	1562
Def't Exh. 24: Rodriguez Declaration (Doc. 96-2)	1579
Def't Exh. 27: Every Step You Take	1587
Def't Exh. 30: AZ Ex. 18 (admitted portions only)	1631
Def't Exh. 31: AZ Ex. 19 (admitted portions only)	1633
Def't Exh. 32: AZ Ex. 20	1639
Def't Exh. 33: AZ Ex. 24	1644
Def't Exh. 34: AZ Ex. 202	1667
Def't Exh. 36: AZ Ex. 209	1777
Def't Exh. 38: AZ Ex. 219	1781
Def't Exh. 40: AZ Ex. 236	1797
Def't Exh. 41: AZ Ex. 260	1804

VOLUME 8 (pages 1811 - 2090) – DOCUMENT EXHIBITS, CONT'D

Exhibits Admitted at Suppression Motion Hearing (Mar. 4-5, 2021), cont'd

Def't Exh. 43: May 2018 Privacy Policy – Redline	1811
Def't Exh. 43a: May 2018 Privacy Policy – Redline (with internet source information)	1840
Def't Exh. 44: Jan. 2019 Privacy Policy – Redline	1865
Def't Exh. 45: Oct. 2019 Privacy Policy – Redline	1895
Def't Exh. 46: McGriff Blog 1	1926

Def't Exh. 47: McGriff Blog 2	1929
Def't Exh. 48: 2018 Quartz Article	1934
Def't Exh. 49: 2018 AP Article 1	1941
Def't Exh. 51: 2019 NYT Article	1948
Def't Exh. 53: Blumenthal-Markey Letter to FTC	1957
Gov't Exh. 1: CAST PowerPoint Presentation.....	1981
Gov't Exh. 2: Geofence Warrant (Doc. 54-1)	<i>see</i> J.A. 107
Gov't Exh. 3: Declaration of Marlo McGriff (Mar. 11, 2020) (same as Def't Exh. 21 (Doc. 96-1))	<i>see</i> J.A. 1551
Gov't Exh. 3a: Declaration of Sarah Rodriguez (Mar. 11, 2020) (same as Def't Exh. 24 (Doc. 96-2))	<i>see</i> J.A. 1579
Gov't Exh. 3b: Supplemental Declaration of McGriff (June 17, 2020) (Doc. 110-1).....	2032
Gov't Exh. 3c: Third Declaration of Marlo McGriff (Aug. 7, 2020) (same as Def't Exh. 23 (Doc. 147)).....	<i>see</i> J.A. 1562
Gov't Exh. 4: Joshua Hylton emails with Google	2034
Gov't Exh. 5: Google Privacy Policy	2048
Gov't Exh. 5a: Google Terms of Service	2081
Gov't Exh. 6: Special Agent D'Errico's C.V.	2088
Gov't Exh. 12: "Got to Be Mobile" Video	<i>see</i> J.A. 2091

VOLUME 9 (pages 2091 - 2092) – DIGITAL MEDIA EXHIBIT

Gov't Exh. 12: "Got to Be Mobile" Video (admitted only at suppression motion hearing).....	(.mp4 file)
---	-------------

VOLUME 10 (pages 2093 - 2138) – SEALED DOCUMENT EXHIBIT

Def't Exh. 3: PDF of Raw Data (<i>see</i> Doc. 69 (sealing order)) (admitted at both discovery motion hearing and suppression motion hearing).....	2093
--	------

VOLUME 11 (pages 2139 - end) – SEALED DIGITAL MEDIA EXHIBITS

Def't Exh. 5: Three Paths Video (admitted at both discovery motion hearing and suppression motion hearing)	(.mp4 file)
Def't Exh. 8: CSV Google Data File (admitted only at suppression motion hearing)	(.csv file, viewable in Excel)

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
RICHMOND DIVISION

UNITED STATES OF AMERICA)
v.) Criminal No.
OKELLO T. CHATRIE) 3:19CR130
-----) March 5, 2021
-----)

DAY TWO

COMPLETE TRANSCRIPT OF MOTION TO SUPPRESS
BEFORE THE HONORABLE M. HANNAH LAUCK
UNITED STATES DISTRICT JUDGE

APPEARANCES:

Kenneth R. Simon, Jr., Assistant U.S. Attorney
Peter S. Duffey, Assistant U.S. Attorney
U.S. Attorney's Office
SunTrust Building
919 East Main Street, Suite 1900
Richmond, Virginia 23219

Nathan P. Judish, Assistant U.S. Attorney
U.S. Department of Justice
950 Pennsylvania Ave., NW
Washington, Virginia 20530

Counsel for the United States

Laura J. Koenig, Assistant Federal Public Defender
Paul G. Gill, Assistant Federal Public Defender
Office of the Federal Public Defender
701 E. Broad Street, Suite 3600
Richmond, Virginia 23219

Counsel for the Defendant

DIANE J. DAFFRON, RPR
OFFICIAL COURT REPORTER
UNITED STATES DISTRICT COURT

APPEARANCES: (Cont'd)

Michael W. Price, Esquire
National Association of Criminal Defense Lawyers
1660 L Street, NW
12th Floor
Washington, DC 20036

Counsel for the Defendant

I N D E X

DIRECT CROSS REDIRECT

MARLO McGRIFF	282	374	424
SARAH RODRIGUEZ	445	485	499
JEREMY D'ERRICO	506	550	593
JOSHUA HYLTON	599	623	646

E X H I B I T S

DEFENDANT'S EXHIBITS:

Page

No. 18	Federal Search Warrant Application	636
No. 19	State Search Warrants & Application	632
No. 24	Rodriguez Declaration	449
No. 41	AZ Ex. 260	283
No. 43A	Privacy Policy - Redline	301
No. 44	Jan. 2019 Privacy Policy - Redline	302
No. 45	Oct. 2019 Privacy Policy - Redline	322
No. 51	2019 NYT Article	303

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

GOVERNMENT'S EXHIBITS:			Page
No. 1	CAST PowerPoint Presentation		515
No. 2	Geofence Warrant		522
No. 3	Declaration of Marlo McGriff		375
No. 3A	Declaration of Sarah Rodriguez		486
No. 3B	Supplemental Declaration of McGriff		375
No. 3C	Third Declaration of Marlo McGriff		375
No. 4	Joshua Hylton Emails with Google		621
No. 5	Google Privacy Policy		386
No. 5A	Google Terms of Service		386
No. 6	Special Agent D'Errico's C.V.		511
No. 12	Video		395

1 (The proceedings in this matter recommenced
2 at 9:05 a.m.)

3 THE CLERK: Day two. Case No. 3:19CR130,
4 United States of America versus Okello Chatrie.

5 The United States is represented by
6 Kenneth Simon, Peter Duffey, and Nathan Judish. The
7 defendant is represented by Laura Koenig, Michael
8 Price, and Paul Gill.

9 Are counsel ready to proceed?

10 MR. SIMON: The United States is ready, Your
11 Honor.

12 MS. KOENIG: The defense is ready, Your
13 Honor. Good morning.

14 THE COURT: All right. Well, welcome back.
15 We have folks on AT&T. So I just need to remind our
16 individuals who are joining us by conference call
17 through AT&T that we have a local rule, Criminal Rule
18 53, and a standing order that prohibits the separate
19 recording or transmission or broadcast of this
20 hearing. We have our court reporter here making our
21 official court record, and there will be no other
22 record made in the case.

23 So thank you all again. We're all ready to
24 go. I see that Mr. McGriff is on the stand.

25 And, Mr. McGriff, I have to remind you that

McGRIFF - DIRECT

282

1 you're still under oath. And we will continue where
2 we left off yesterday. Thank you all very much.

3 MR. PRICE: Thank you, Your Honor. Good
4 morning.

5 THE COURT: Good morning.

6 BY MR. PRICE:

7 Q Good morning, Mr. McGriff.

8 A Good morning.

9 Q How are you?

10 A Doing well. How are you?

11 Q I'd like to start with just a bit of housekeeping
12 from the end of the day yesterday. We were talking
13 about Defense Exhibit 41, which is an email chain from
14 January 28, 2017, in which Google employees are
15 discussing the language used to describe Location
16 History. Do you recognize that email?

17 A Yes, this is the email from yesterday.

18 MR. PRICE: I would just move to admit this
19 into evidence, Your Honor.

20 THE COURT: Is there any objection?

21 MR. SIMON: No objection, Judge.

22 MR. PRICE: Thank you.

23 BY MR. PRICE:

24 Q Now, yesterday you --

25 THE COURT: I'm just going to say on the

McGRIFF - DIRECT

283

1 record that it's entered. We all know it is, but I
2 hadn't gotten to that page of your exhibit list yet.
3 Pardon me.

4 (Defense Exhibit No. 41 is admitted into
5 evidence.)

6 BY MR. PRICE:

7 Q Yesterday you testified that you didn't know the
8 precise number of users with Location History enabled
9 in 2019?

10 A No, I do not know that precise number.

11 Q But you did say in your affidavit that roughly a
12 third of active users had Location History enabled in
13 2019?

14 A Active Google accounts, yes.

15 Q And that that amounted to numerous tens of
16 millions of Google users. Could you walk us through
17 how you got to that figure, one-third and numerous
18 tens of millions?

19 A At the time that that was being prepared, we
20 looked at the total number of users who had Location
21 History enabled for their account. That figure was
22 prepared over a year ago. I believe we also looked at
23 the number of active Google accounts. And then I
24 believe we also looked at, for Location History
25 specifically, whether or not the account was active.

McGRIFF - DIRECT

284

1 Q Okay. Do you recall what the whole number with
2 Location History enabled was?

3 A I don't recall the whole numbers. Again, we
4 prepared those, at this point, well over a year ago.

5 Q So you came out with the figure of one-third. How
6 did you figure out the denominator?

7 A We looked at the total number of Google accounts
8 as provided by that team, and we asked at the time for
9 the life of the product. The number has always
10 roughly been a third. And so when we were preparing
11 the -- I believe it was the first brief, and then also
12 my first declaration, we verified all the numbers
13 again, and it was still roughly a third.

14 Q But you have no recollection of what that number
15 was?

16 A I could not recall that number off the top of my
17 head. I'm sorry.

18 Q So within 50 million?

19 A I do not recall that number off the top of my
20 head. I'm sorry.

21 Q All right. Shift gears a little bit. I want to
22 call your attention to your third exhibit or your
23 third declaration, which is Exhibit 23, the second
24 page, in which you say Google's records reflect that
25 Okello opted in to the Location History service on

McGRIFF - DIRECT

285

1 July 9, 2018; is that correct?

2 A That is what it says, yes.

3 Q At 4:09 UTC?

4 A That is what it says, yes.

5 Q And Location Reporting was enabled at the same
6 time?

7 A That is correct, yes.

8 Q And that can only happen, according to your
9 declaration, when the opt-in occurs through a device
10 based consent flow?

11 A That is correct.

12 Q In other words, you can't -- you can say you're
13 sure it happened on the phone and not on a browser on
14 a desktop?

15 A That's correct, yes. Excuse me. Just to clarify.
16 That it happened on that specific device, yes.

17 Q Thank you. On the third page, you say that you,
18 as in Google, does not have a record of the specific
19 interface, i.e., the particular application or setting
20 opt-in screen that Mr. Chatrie used to enable Location
21 History; is that correct?

22 A That is correct, yes.

23 Q But as of July 9, 2018, it was possible to opt in
24 to Location History when attempting to use a feature
25 powered by Location History. That's what you wrote?

McGRIFF - DIRECT

286

1 A That is correct, yes.

2 Q And it's true?

3 A That is true, yes.

4 Q An example would be the Google Maps application?

5 A That is correct, yes.

6 Q Another example would be the Google Photos
7 application?

8 A That is correct, yes.

9 Q And another example would be the Google Assistant
10 application?

11 A At that time we were removing the opt-in through
12 Assistant. I think one of the things we were looking
13 into was it still possible on that exact date, but
14 there was support roughly in that time period to opt
15 in to Location History through Assistant, yes.

16 Q You don't mention Google Assistant in your
17 application, do you, or in your declaration?

18 A In my application --

19 Q Your declaration, sorry.

20 A In my declaration, I don't believe I mentioned an
21 exhaustive list of opt-ins.

22 Q Okay. And just to be clear, Location History
23 could have been enabled here through the Google
24 Assistant setup?

25 A That is possible, yes.

McGRIFF - DIRECT

287

1 Q Okay. The defense has an expert opinion saying
2 that based on a forensic examination of the phone,
3 Location History was enabled through the Google
4 Assistant app, which was installed at virtually the
5 same time. You don't have any information to dispute
6 that, do you?

7 A I do not, no.

8 Q All right. So with that in mind, I want to go
9 back and try and clear up a little bit of confusion
10 from yesterday. You said that you didn't remember if
11 Google had changed its privacy policy on May 25, 2018;
12 is that correct?

13 A I did not -- I do not recall any location specific
14 changes in the privacy policy in May 2018, that is
15 correct.

16 Q Okay. Now, if you were to look at a list of
17 Google's past privacy policies and see those redlines,
18 would that refresh your recollection?

19 A Possibly. I don't often browse the broader
20 company privacy policy.

21 Q Okay. I'd like to show you a screenshot, if I
22 could, of one of Google's web pages that has a list of
23 all of the previous privacy policies in it. Do you
24 recognize that?

25 A I see that this is the privacy policy's page, yes.

McGRIFF - DIRECT

288

1 Q Okay. And it's helpful, actually. It includes
2 versions showing track changes, comparing one version
3 to the other. Can you take a look at the bottom of
4 the page and tell us whether Google changed its
5 privacy policy on May 25, 2018?

6 A That is what the page suggests, yes.

7 Q And the previous policy that had been in effect
8 since December was in effect since December 18, 2017?

9 A That is what the page suggests, yes.

10 Q So if you click on the link for comparison of
11 these two policies, you get something that looks like
12 this. It's a redline of the new privacy policy
13 compared to the old one. Does that look correct to
14 you?

15 A That is correct, yes.

16 Q So if we go and we look at this comparison, the
17 previous privacy policy didn't mention Location
18 History by name; is that correct?

19 A Where's the comparison, sir?

20 Q Oh, I'm sorry. Can you please turn your attention
21 to what has been marked as Defense Exhibit 43A. This
22 is the same -- you should have a copy of the document.
23 This is the same document we were looking at
24 yesterday. It has the Google web page and link at the
25 bottom.

McGRIFF - DIRECT

289

1 MR. SIMON: Judge?

2 THE COURT: Yes.

3 MR. SIMON: I'm going to object to, I think,
4 the continued insistence despite the witness's
5 consistent answer. He says May 2018 wasn't the first
6 time Location History, to his knowledge, was in a
7 privacy policy. They keep showing him May of 2018,
8 not December of 2017. If defense counsel is insisting
9 upon this, put them both next to him, let him look at
10 both policies, and then he can assess. But I think
11 this redline is -- he's inserting his opinion that the
12 redline, the new words are all inserted as of May of
13 2018. And there's no indication from just looking at
14 it that that's true. So I'd ask for more context be
15 given to the witness about these two policies.

16 THE COURT: I'm going to allow him to use
17 this document for whatever it's worth. It doesn't
18 independently show up that the December 18th policy
19 existed without this document in it necessarily. But
20 I think that can be argued one way or the other as far
21 as what inference can be drawn from the document. And
22 you have argued your inference, and they are arguing
23 theirs.

24 If they have a separate document, then they
25 will respond to your objection, but if this is the one

McGRIFF - DIRECT

290

1 they're using, then you all will each retain your
2 positions. So I'm going to overrule the objection.

3 MR. SIMON: Understood, Judge.

4 MR. PRICE: Thank you, Your Honor.

5 BY MR. PRICE:

6 Q So the document that you have here is a comparison
7 of those two provided by Google; correct?

8 A That is correct.

9 Q And the crossed out lines, that's the language
10 that was taken out from the December 2017 policy?

11 A It appears that way, yes.

12 Q And the language that's not crossed out is the
13 policy in effect as of May 2018?

14 A That is what it appears to show, yes.

15 Q I'd like to turn your attention to page 6, if I
16 could. It says --

17 THE COURT: Let him get there.

18 MR. PRICE: Excuse me.

19 BY MR. PRICE:

20 Q It says at the bottom of the screen there, "You
21 can also turn on Location History if you want to save
22 and manage your location information in your account";
23 correct?

24 A That is correct, yes.

25 Q And that is new language that didn't appear in the

McGRIFF - DIRECT

291

1 2017 policy; correct?

2 A That appears correct. One question. Can you go
3 back to the policy's page that you were showing with
4 the comparison?

5 Q Sure.

6 A The top of the page. I believe all of this
7 language is captured under "technologies" to the
8 right. I don't know if this is an active page or just
9 a screenshot.

10 THE COURT: So, I see you're interacting with
11 the screen.

12 THE WITNESS: Sorry.

13 A I believe this language is -- it appears very
14 familiar from the technologies section of the privacy
15 and terms. I don't know if this is a screenshot --

16 Q It's a screenshot. It's not clickable. So long
17 as we're talking about it, it may make sense to ask
18 you, the technologies page that you see here is
19 distinct from the privacy policy part of this page;
20 correct?

21 A It is a separate section, yes.

22 Q And the information in the technologies page is
23 not actually in the privacy policy's page; correct?

24 A I believe that's what was done here with this
25 change, that's correct, yes.

McGRIFF - DIRECT

292

1 Q Thank you. So, I want to turn your attention back
2 to that redline of the privacy policy and specifically
3 to page 12.

4 THE COURT: Page 12 now, not page 6?

5 BY MR. PRICE:

6 Q So, on page 12, it mentioned Location History one
7 other time. It says, You can turn on Location History
8 if you want traffic predictions for your daily commute
9 or you can save your YouTube watch history to get
10 better video suggestions.

11 A That is what it says, yes.

12 Q I want you to take a look at this document and
13 tell me if it says anything else about Location
14 History.

15 A All 25 pages?

16 THE COURT: Yes.

17 Q Yes, please.

18 MR. PRICE: Your Honor, while we're taking a
19 minute, I wanted to let you know that I'm getting word
20 from my colleagues at NACDL that people on the phone
21 cannot hear what is happening, that they were able to
22 hear at the beginning and that the audio stopped.

23 THE COURT: Okay. Just a second. We'll call
24 IT. Thanks for letting us know.

25 (AT&T is called.)

McGRIFF - DIRECT

293

1 A That appears to be correct. There are two
2 explicit references to Location History in the policy
3 as revised, yes.

4 Q Thank you very much. And those are both new
5 editions to the privacy policy?

6 A It appears that (inaudible.)

7 THE COURT: Wait a minute. My court reporter
8 can't get this while the AT&T operator is talking.

9 Okay. We'll just take a little break. I'm
10 sorry.

11 THE CLERK: Are folks able to hear us now?

12 A VOICE: Yes, we can hear you now.

13 THE COURT: All right. Has anybody new
14 joined? Do I need to give the same admonition?

15 THE CLERK: I don't know the answer to that.

16 THE COURT: All right. I'm sorry. We had a
17 technical drop of the call. I do need to remind
18 anybody, if there are new folks there, that you can't
19 under our Criminal Rule 53 or our standing order
20 rebroadcast, record, or telecast any kind of recording
21 or version of this hearing. Our court reporter is
22 creating our record here.

23 All right. So why don't you ask the last --
24 I know, Mr. McGriff, you answered the question. So
25 why don't we start with that, and then we can go

McGRIFF - DIRECT

294

1 forward.

2 A There are two -- the two references you mentioned
3 are the two mentions of Location History explicitly in
4 the updated version, yes.

5 Q Thank you. And those appear to be new editions to
6 the privacy policy?

7 A That is correct, yes.

8 Q And the privacy policy doesn't say anything else
9 about Location History other than those two
10 references?

11 A Yes, the privacy policy appears to include quite a
12 bit of additional information generally, yes.

13 Q Thank you. So at some point in 2018, what you
14 were calling yesterday the descriptive text for
15 Location History changed; correct?

16 A What I was mentioning yesterday is that that
17 language changed, I believe, before 2018, yes.

18 Q The language changed before 2018?

19 A That is what I believe based on the document you
20 showed me yesterday, yes.

21 Q You mean the email?

22 A The email, yes.

23 Q And did you see the screenshots from yesterday?

24 A I did, yes.

25 Q With the old language, the saves a private map

McGRIFF - DIRECT

295

1 language going through the beginning of 2018 and the
2 saves where you go with your signed-in devices
3 appearing later in 2018?

4 A I did see those, yes.

5 Q You would agree that the language changed at some
6 point?

7 A The language changed at some point within 20- --
8 at some point from 2017 onward, yes.

9 Q But you can't say exactly when?

10 A Not off the top of my head, no.

11 Q Would it depend on the device that somebody was
12 using?

13 A It would depend -- after the change is made, there
14 are a host of variables that can impact when a
15 specific user saw that change. As I mentioned
16 yesterday, if I leave here right now and pick up any
17 device that has been sitting on a shelf for three
18 years, the language when that device starts up would
19 be dated to when it was baked into the device.

20 Q Can I ask you about that? I was confused
21 yesterday when you said that because my understanding
22 is that you would have to be connected to Wi-Fi and
23 signed in to your Google account in order to even be
24 asked about the permissions for Location History. Is
25 that correct?

McGRIFF - DIRECT

296

1 A You would need to be signed in and connected to
2 opt in to Location History, that's correct.

3 Q And if you were connected to the internet and
4 signed in, the phone would update itself; correct?

5 A Presumably, yes, that's correct.

6 Q In fact, one of the first things a phone does when
7 it connects to the internet for the first time is
8 update itself; correct?

9 A Not all screens and flows are updated, no.

10 Q So you can't say which consent flow would have
11 been updated when? It varies?

12 A Not -- I mean, I don't know how to generalize this
13 statement, but there is not a call to the server for
14 every screen shown in almost any scenario. Some of
15 that will be local.

16 Q So sometimes it will update with new language and
17 sometimes it won't?

18 A No. The consent copy will not -- is read from
19 the -- well, again, I shouldn't generalize this.
20 Speaking about Location History specifically, you can
21 find a flow that references Location History, the
22 feature, that is baked into an APK.

23 Q I'm sorry? What?

24 A You can find a flow that approaches the feature
25 that says Location History does this. That is

McGRIFF - DIRECT

297

1 potentially dated. If it is not a screen that we can
2 update on the server remotely, if it's not checking to
3 get updated copy, those stale flows is what I would
4 call it, we block those. So those will not work.
5 There's no way to opt in to that flow, but we are also
6 unable to go and change that screen retroactively
7 because it is already baked into the user interface.

8 Q So if it's an old consent flow, if it's one that's
9 no longer supported, could Location History be
10 successfully enabled?

11 A It cannot, no.

12 Q So, in order to successfully enable Location
13 History, the language would have to be updated?

14 A A successful opt-in needs to be a flow that is
15 currently supported. If we no longer support the
16 flow, then that opt-in would fail silently, but,
17 again, because it's old. We don't have a way to
18 return a message in the UI to tell the user that it
19 failed.

20 The user would attempt an opt-in. It would fail
21 silently. The server would say "I have an opt-in
22 request from a dated device." And it will not
23 successfully opt the user in. The user then would
24 notice that this happened only if they then attempted
25 another flow and were once again prompted to opt in to

McGRIFF - DIRECT

298

1 Location History. The user would realize "I thought I
2 already did," but they hadn't, and that's why they
3 would be prompted again.

4 Q So we know in this case that Location History was
5 successfully opted into?

6 A That is correct, yes.

7 Q So in order to do that, it would have been through
8 the updated consent flow?

9 A It would have been through a currently supported
10 consent flow, that is correct, yes.

11 Q And that would have been, at least for the
12 descriptive text, what language?

13 A I don't know how.

14 Q Would it be the
15 saves-where-you-go-with-your-devices or would it be
16 the creates-a-private-map language?

17 A It would be some iteration of the copy that was
18 available at that time. I don't know how I can
19 confirm that. I remember from the research that we
20 did when I filed the declaration that we were not able
21 to determine the specific UI in that case. Something
22 that we've changed since then. We now do track this.
23 But at the time we were not. So we were unable to
24 provide this specific screen of that opt-in at that
25 time.

McGRIFF - DIRECT

299

1 Q Okay. All right. Thank you.

2 Even though that language may have changed at some
3 point in time, getting rid of the private map
4 language, Google kept it around; correct? It added it
5 to its 2019 privacy policy January 22. Do you recall
6 that?

7 A That that specific copy string was used again?

8 Q Actually, I would like to turn your attention to
9 Defense Exhibit 44. This is another redline showing
10 changes between the privacy policies. This one
11 showing the changes in January 22, 2019. Is that
12 correct?

13 A That is what this appears to show, yes.

14 Q Okay. And if we could go down to page 4, please.
15 We see that it says that prior to January 22, with the
16 crossed out language, it says -- it used to read, You
17 can also turn on Location History if you want to save
18 and manage your location information in your account.
19 Is that correct?

20 A That's correct.

21 Q The old language?

22 A Yes.

23 Q But the new language starting on January 22, 2019,
24 reads, You can also turn on Location History if you
25 want to create a private map of where you go with your

McGRIFF - DIRECT

300

1 signed-in devices; is that correct?

2 A That is correct, yes.

3 Q So the private map language came back in January
4 of 2019?

5 A I never said that it went away.

6 Q Well, I meant compared to the descriptive text in
7 the consent flow. It was changed, according to your
8 testimony earlier, that it changed at some point from
9 saves a private map to saves where you go; correct?

10 A Again, as I mentioned yesterday, we are always
11 looking for ways to further improve and clarify
12 products. That a specific string was introduced does
13 not necessarily mean a previous string was retired.
14 That the decision was made by someone to include one
15 string versus the other here does not suggest that the
16 other string was deemed no longer usable or invalid.
17 The decision here on -- whoever made the decision on
18 which string to include here felt this was the best
19 for this context.

20 Q In your opinion, is there a big difference between
21 those two phrases?

22 A Between -- just to be clear, which two phrases?

23 Q Saves a private map of where you go and saves
24 where you go with your device.

25 A Big difference? Neither changes -- either would

McGRIFF - DIRECT

301

1 be appended to the Location History consent, and that
2 text did not change in this period. There seems to be
3 a limited difference in my opinion on these two.

4 Q Okay. Thank you. So even though it says "create
5 a private map of where you go with your signed-in
6 devices," and this is in the privacy policy, the data
7 that gets saved doesn't get saved just on the device;
8 right?

9 A No.

10 Q It gets sent to Google?

11 A That is correct, yes.

12 Q Who uses it for advertising?

13 A We use it at the account level to power quite a
14 few features, yes.

15 Q And sometimes give it to the government?

16 A We will always comply with a warrant.

17 Q Okay. Thank you.

18 MR. PRICE: Just one housekeeping thing, Your
19 Honor. I would like to move to admit both Defense
20 Exhibit 43A as well as Defense Exhibit 44 into the
21 record.

22 THE COURT: Any objection?

23 MR. SIMON: No objection, Judge.

24 THE COURT: All right. They will be entered.

25 (Defense Exhibit No. 43A and Defense Exhibit

McGRIFF - DIRECT

302

1 No. 44 are admitted into evidence.)

2 BY MR. PRICE:

3 Q Okay. So I'm sure you're aware that the *New York*
4 *Times* published an article about Location History in
5 April of 2019.

6 A Yes, I'm aware of that.

7 Q So I'd like to show you Defense Exhibit 51. Is
8 this the article?

9 A This is the article, yes.

10 MR. PRICE: Your Honor, I'd move to admit
11 Defense Exhibit 51 into evidence.

12 THE COURT: Any objection?

13 MR. SIMON: Judge, we would object to
14 entering this article. I think the relevance of it is
15 not there, Judge. And I think it also is basically
16 attempting to enter a legal opinion, various legal
17 opinions, through this article. He can question on it
18 as background information, Judge, but I think, again,
19 this just opens the record to, I think, even the
20 government putting articles in the record that show
21 the efficacy of solving violent crimes using this
22 warrant. I'm just not sure why an article like this
23 is necessary to but in the record.

24 MR. PRICE: Once again, we're not introducing
25 it for the truth of the matter. We're not going into

McGRIFF - DIRECT

303

1 any detail about what the article says. Our interest
2 here is in Google's response to it.

3 THE COURT: All right. Well, I'll allow it
4 in for that limited purpose. It certainly is a public
5 record. I am going to say, Mr. Price, I want you to
6 be consistent about not appearing that you are
7 entering it in for the truth of the matter.

8 MR. PRICE: I will note that the next time,
9 Your Honor. Thank you.

10 THE COURT: So the objection is overruled.

11 (Defense Exhibit No. 51 is admitted into
12 evidence.)

13 BY MR. PRICE:

14 Q The title of the article is "Tracking Phones,
15 Google is a Dragnet for the Police"?

16 A Yes, that is the title of the article.

17 Q And the article's about geofence warrants like the
18 one in this case?

19 A That is correct.

20 Q And it specifically talks about Location History?

21 A It does mention Location History, yes.

22 Q Thank you.

23 MR. PRICE: Your Honor, I hate to do this,
24 but I'm getting word again that the phone line has
25 gone dead.

McGRIFF - DIRECT

304

1 THE COURT: All right. We're going to need
2 to not continue questioning while that happens. Maybe
3 we can get IT in, please.

4 (AT&T is called.)

5 THE CLERK: Can everyone hear us on the call?

6 A VOICE: Yes.

7 THE COURT: Can I ask you all, is there
8 something you hear before the phone call drops?

9 A VOICE: No.

10 THE COURT: And everybody has dropped off the
11 phone call, not just some?

12 A VOICE: Yes. I checked with a separate
13 party.

14 THE COURT: All right. So we're going to
15 call in our IT department and have them checking this
16 hopefully in a way that doesn't interrupt the flow of
17 our questioning here. I have no idea what's
18 happening. We have not had this problem before,
19 certainly with our AT&T system, but because of how
20 we're operating, I need to remind you all that you
21 can't rebroadcast this or record it pursuant to our
22 local rule and our standing order.

23 Ms. Koenig?

24 MS. KOENIG: Your Honor, I just stood up
25 because I know that the Federal Public Defender Office

McGRIFF - DIRECT

305

1 was having a widespread VPN connection problem earlier
2 this morning. And so since we are also connected with
3 the judiciary, I don't know if it's a broader --

4 THE COURT: I hear the Federal Public
5 Defender was having a widespread blah, blah, blah.

6 MS. KOENIG: A broader VPN connection
7 problem. So employees are remotely connecting in to
8 our servers. And that was earlier today. I think the
9 systems are separate, but I don't know if it indicates
10 maybe a broader issue with the AT&T connections that
11 are connected with the judiciary as well.

12 THE COURT: All right.

13 Certainly, we'll have our IT folks look into
14 it, and we're doing the best -- we do have to keep
15 this process moving. So I'm going to ask you to keep
16 questioning, please.

17 MR. PRICE: Thank you, Your Honor.

18 BY MR. PRICE:

19 Q So, Mr. McGriff, you're aware that the *New York*
20 *Times* article we were just talking about prompted
21 another email exchange between Google employees?

22 A Is there a specific change you're referring to?

23 Q Let me show you Defense Exhibit 37. It's an email
24 chain that begins, I believe, the same day that the
25 *New York Times* article was published.

McGRIFF - DIRECT

306

1 A Yes, I see that email, yes.

2 Q Do you recognize it?

3 A I can't say I recall it specifically, but that is
4 not to suggest that I may not have seen it in the
5 past.

6 Q You would have been aware of emails responding to
7 the Location History story; correct?

8 A Sorry. Are you asking me about this specific
9 exchange?

10 Q Generally. You're aware of the other emails?

11 A I'm aware that the article was discussed, yes.

12 Q Okay. And it was discussed here as well?

13 A That appears to be the focus of this exchange,
14 yes.

15 Q Thank you.

16 MR. PRICE: Your Honor, I'd like to move
17 Defense Exhibit 37 into evidence, please.

18 MR. SIMON: Judge, I'm not going to object
19 because, again, we've let these Google emails in.
20 These are cherry-picked emails from Arizona litigation
21 by Arizona. This particular email has some back and
22 forth expressing legal opinions that not even this
23 witness or any witness that comes before this Court
24 will be able to express.

25 I think the Court should remove any opinions

McGRIFF - DIRECT

307

1 about this search warrant that are expressed in any of
2 these emails. And I think this is the email where you
3 will have a lot of back and forth about the propriety
4 of it. And I think, again, it's creating a record in
5 which you have folks who won't testify before this
6 Court, who can't be cross-examined, who are expressing
7 opinions about issues of material fact in this case.

8 So I would object to this email being
9 wholesale introduced, particularly as it relates to
10 opinions about the geofence warrant before the Court.

11 MR. PRICE: Your Honor, the relevant opinions
12 in this email chain just relate to confusion over
13 Location History. Again, we're not admitting it for
14 anybody's true statement about what Location History
15 does or doesn't do. Simply to show that Google
16 employees were concerned, confused, and that's all.

17 THE COURT: So you don't intend to quote
18 this?

19 MR. PRICE: I do, but not for technical
20 statement or legal opinion.

21 MR. SIMON: Judge, without that point -- not
22 to continue down this line, but we consistently
23 concede when they make that point, the reality is,
24 Judge, if that is proceeded with in depth, I don't
25 think they can come up with a nontruth-of-the-matter

McGRIFF - DIRECT

308

1 defense for these emails, particularly one talking
2 about a *New York Times* article addressing the geofence
3 warrant before -- the type of warrant before this
4 Court. They are quoting from the article. Some
5 expressing, Oh, this seems like a problem, and others
6 saying, Well, it doesn't.

7 I just think this sort of legal discussion in
8 emails in a record of appeal without clarification
9 creates a lot of confusion that I don't think we ought
10 to put into the record.

11 MR. PRICE: If I quote a statement like that,
12 Mr. Simon can object.

13 THE COURT: His point is it's in the record,
14 right? His point is that when you put in these
15 documents in full, then it's in the record, and so
16 that anybody reading it would be reading the -- not
17 just, oh, it's for the purpose of confusion. It's
18 that they're saying there's a problem.

19 I have not read through these emails in
20 depth. I've certainly looked at all of your exhibits.
21 And I am -- I have some concern, especially the way
22 you've been cross-examining this witness by quoting
23 parts of the documents, that it feels as if you are
24 suggesting that the words in the documents are what
25 you are trying to put into the evidence.

McGRIFF - DIRECT

309

1 What you're having this witness say in
2 response is "I see those words are there." I'm not
3 sure what you're getting out of that.

4 So I'm going to tell you, I'm going to admit
5 it for the limited purpose, but I'm also leaving open
6 the possibility of it being redacted or removed from
7 the record based on how it is utilized in the future.

8 But, you know, you're walking a thin line
9 here, Mr. Price. I keep telling you, don't quote the
10 documents as if you are trying to get this witness to
11 adopt what's in them. I know this is Exhibit 224 from
12 the Arizona case. It says that. Everybody is open
13 about it. And the government is recognizing that this
14 is already a public record somewhere. But I can tell
15 you, it doesn't say who's involved. It doesn't say
16 what their position is. It doesn't say in what
17 context that these emails went back and forth. We
18 have no foundation for these emails in this court.
19 And this witness saying "I see that's what this
20 document says" is not moving this case forward very
21 much.

22 I am hoping that you will convince me in how
23 you are asking questions about these documents in the
24 future that you are not quoting certain quotes here
25 that feel as if you are trying to put in the record

McGRIFF - DIRECT

310

1 that Google has made admissions. Okay?

2 MR. PRICE: Yes, Your Honor. The point
3 simply is that --

4 THE COURT: No, you don't get to summarize
5 the point. You're not testifying here. Either you
6 make the point through the witness or you don't.

7 All right. Please go forward.

8 BY MR. PRICE:

9 Q Mr. McGriff, are you aware that some Google
10 employees expressed confusion over Location History
11 controls following the *New York Times* article?

12 A I see that's what's discussed in this email, yes.

13 Q And were you aware at the time that some employees
14 were concerned and confused over Location History
15 following this article?

16 A I am aware at the time that discussion was had
17 about this article, yes.

18 Q So when Google expressed confusion on page --
19 well, this is going to be Bates 63211 to 63212. And
20 that person writes, "I'd want to know which of these
21 options (some? all? none?) enter me into the
22 wrongful-arrest lottery. And I'd want that to be very
23 clear to even the least technical people."

24 Is that Google employee expressing confusion over
25 the Location History settings and concern?

McGRIFF - DIRECT

311

1 A I have no idea what, from this snippet, this
2 person was attempting to convey.

3 Q The person didn't know which of the options were
4 available to disable Location History?

5 A I don't believe --

6 MR. SIMON: Judge, I'm only going to say this
7 because I think it's the way that the examination has
8 been happening with this witness throughout. The
9 witness answered that question. He didn't get the
10 answer he liked. He is now going back and asking him
11 the same question again. So is this what he meant?
12 Is this what he meant? He says "I have no idea." I
13 don't know how you get away from "I have no idea."
14 But the objection is asked and answered, Judge.

15 MR. PRICE: I'll move on.

16 THE COURT: Okay.

17 BY MR. PRICE:

18 Q Could I turn your attention to page 63213? That's
19 Bates 63213.

20 THE COURT: I'm sorry. What exhibit are you
21 in again? My apologies.

22 MR. PRICE: This is Defense Exhibit 37, Your
23 Honor. It's page 10 of the PDF, Bates No. 63213.

24 THE COURT: So it's Exhibit 215 from the
25 Arizona. I misspoke earlier.

McGRIFF - DIRECT

312

1 BY MR. PRICE:

2 Q I just want to draw your attention to one other
3 part of this email chain where another Googler
4 responding to the same thread says, "Speak as a user,
5 WTF? More specifically I thought I had location
6 tracking turned off on my phone. However the location
7 toggle in the quick settings was on. So our messaging
8 around this is enough to confuse a privacy focused
9 Google-SWE. That's not good." Do you see that there?

10 A I see that is what's written here, yes.

11 Q What's an SWE?

12 A Software engineer.

13 Q So this is a Google software engineer expressing
14 confusion over the settings for Location History; is
15 that correct?

16 A This is a -- what is written here is that this is
17 a Google software engineer. It is not clear to me
18 that they are specifically referring to Location
19 History. The location toggle that's being referenced
20 here, the toggle that appears in settings at the
21 device level is the Location Master which controls
22 location for the device, which is distinct and
23 separate from Location History.

24 Q Right. He seems to be very confused; right?

25 A Well --

McGRIFF - DIRECT

313

1 Q The article that he's responding to is the *New*
2 *York Times* article which talks about Location History,
3 correct?

4 A This article talks about location usage and
5 collection, including Location History. This exchange
6 specifically mentions multiple settings that control
7 different levels, what access, and type of location
8 information Google has access to. That statement
9 specifically suggests, from what's written here, does
10 not suggest that it's explicit to Location History.

11 So I would say, yes, this is a Google software
12 engineer expressing some thoughts on a location
13 toggle, which is not specified to be Location History
14 in this context.

15 Q Okay. Thank you very much.

16 You're aware that the *New York Times* article
17 prompted another congressional inquiry; is that
18 correct? In 2019?

19 THE COURT: Can we be specific? You have now
20 introduced a second *New York Times* article; am I
21 right?

22 MR. PRICE: No, this is the only *New York*
23 *Times* article.

24 THE COURT: It's all April 15?

25 MR. PRICE: Yes, Your Honor.

McGRIFF - DIRECT

314

1 THE COURT: Just a different version. All
2 right.

3 THE WITNESS: Which inquiry are you referring
4 to?

5 Q Can I show you Defense Exhibit 54, please.
6 Shortly after the *New York Times* article ran, the
7 House Committee on Energy and Commerce sent a letter
8 to Google's CEO on April 23, 2019. Is that correct?

9 A That is what this exhibit shows, yes.

10 Q And this is the letter that was sent to Google's
11 CEO?

12 A That is correct, yes. Can I ask one
13 clarification?

14 Q Yes.

15 A When you say "inquiry," you mention that you
16 also -- there was another inquiry you mentioned
17 yesterday. What do you mean by "inquiry"? Just a
18 general outreach with questions or do you mean
19 something more formal?

20 Q I don't think I had a specific definition. This
21 letter expressed some concern about Sensorvault and
22 the database Google uses. That's the database Google
23 uses to store Location History?

24 A That's correct, yes.

25 Q Thank you.

McGRIFF - DIRECT

315

1 Following the *New York Times* article, Google made
2 even more changes, some of which you discussed in your
3 blog post; correct?

4 MR. PRICE: Excuse me, Your Honor. I would
5 move to admit the House letter into evidence for the
6 limited purpose of its existence.

7 MR. SIMON: Judge, we're going to object on
8 relevance grounds, not merely hearsay. I think beyond
9 that, Judge, in the interest of fairness, defense
10 counsel, at the very least, ought to find Google's
11 response to these questions and put it in the record
12 as well if we're going to put this letter in. And we
13 at least have that with the Senate letter that also
14 wasn't relevant, but they are questions directed to
15 Google that they -- if we're going to put sort of
16 hearsay into the record on this point, that would be
17 helpful. But the objection is relevance. I don't see
18 the point of congressional leaders asking questions to
19 major corporations, how that plays into this hearing.

20 THE COURT: So, I'm going to overrule the
21 objection as to purported relevance. It's clear that
22 the defense has a theory that either it's going to
23 shore up or not with respect to how Location History
24 notifications or operations changed.

25 I do agree, though, that -- so it will be for

McGRIFF - DIRECT

316

1 establishing its relevance in greater context later.
2 And for the limited purposes that we're talking about.
3 I do agree, though, that in fairness, the answer
4 should go in absent objection from Google.

5 And so you sent in a Senate inquiry also, and
6 I think some of the responses were there. But I want
7 you to work with the Assistant United States Attorney
8 and counsel for Google about whether or not they want
9 to shore up any responses. That strikes me as a more
10 fulsome record than what you've offered, and you don't
11 necessarily have to offer that, but now that it's been
12 raised, I think we should close the loop. All right?

13 MR. PRICE: Thank you, Your Honor.

14 Just to clarify, the Senate letter was a
15 request to the FTC for an investigation.

16 THE COURT: Right. Right. Well, the
17 responses that you submitted were responses to what?

18 MR. PRICE: The request for an investigation
19 included an attachment, which was a previous letter
20 that Google -- that the senator had sent to Google
21 seeking further clarification.

22 THE COURT: All right. So, I'm going to have
23 you all agree. That's the problem with this, Mr.
24 Price. Right? If they are using the phrase
25 "cherrypick," you are allowed to advocate, but if you

McGRIFF - DIRECT

317

1 get called on it, I'm telling you, make a full and
2 fair record. So I'm going to allow you all to caucus
3 about that, and then place on the record what your
4 decision was or Google's position is and then I will
5 make a final ruling.

6 MR. PRICE: Thank you.

7 THE COURT: Thanks.

8 BY MR. PRICE:

9 Q Okay. So we've got the *New York Times* article as
10 well as the AP article we talked about the day before,
11 the year before --

12 THE COURT: I was thinking the AP article.
13 I've got it. Okay.

14 BY MR. PRICE:

15 Q And in response to this feedback, was this the
16 feedback you were describing in your blog post when
17 you talked about some of the changes that Google was
18 making to improve Location History?

19 A These are a few of several signals of feedback
20 that we receive on a regular basis, yes.

21 Q Okay. Thank you. As a result of that feedback,
22 Google made some more changes to the way Location
23 History functions, the controls for users?

24 A I am not aware of a point in time in the life of
25 the product that we have stopped making improvements

McGRIFF - DIRECT

318

1 and changes to the product.

2 Q Okay. One of those changes that you made was the
3 new auto delete function that you wrote about in your
4 blog post; correct?

5 A Auto delete was not a change specific to Location
6 History. It was rolled out at this point to several
7 Google products, yes.

8 Q But it applies to Location History?

9 A It does apply to Location History, yes.

10 Q And in your blog post, you were discussing it in
11 the context of Location History?

12 A In the blog post, it's discussed both in the
13 context of Location History and search.

14 Q Okay. I want to ask you about that deletion
15 process, though.

16 A Yes.

17 Q Even if a user deletes their Location History
18 data, it doesn't get deleted immediately, does it?

19 A It's near immediate.

20 Q There's a deletion process?

21 A That is correct.

22 Q And Google doesn't confirm that using Google's
23 tools for deleting location data will actually delete
24 that location data, does it?

25 A Can you clarify what you mean by confirm?

McGRIFF - DIRECT

319

1 Q Sure. Let me show you Defense Exhibit 45. It's
2 the October 29, 2019, privacy policy redline, track
3 changes version.

4 THE COURT: I'm sorry. What exhibit again?

5 MR. PRICE: Defense Exhibit 45.

6 BY MR. PRICE:

7 Q It says Google added a caveat to the -- I want to
8 turn your attention to the "retaining your
9 information" section of the privacy policy.

10 MR. PRICE: And for the Court, this is on
11 page 15 of the PDF. The pages are not internally
12 numbered.

13 BY MR. PRICE:

14 Q There's a section there that says "Retaining your
15 information"?

16 A Yes.

17 Q And this is a new section that was added based off
18 of the track changes that you see?

19 A Expanded?

20 Q Added. Added.

21 A The crossed-out copy here --

22 Q That's the old language. And the non-crossed out
23 copy is the new language.

24 THE COURT: You know what? He is saying it's
25 expanded. And I think you can understand that what he

McGRIFF - DIRECT

320

1 means is that this is longer text than was there
2 previously. And so bantering with the language with
3 your witness --

4 MR. PRICE: Maybe I misheard him. My
5 apologies. Excuse me.

6 THE COURT: What?

7 MR. PRICE: This is -- just that this was,
8 this language wasn't there before. That's all.

9 THE COURT: But that's not how you're
10 examining him. So the way you cross-examine somebody,
11 without injecting your own opinion necessarily, is you
12 say that there's a paragraph that is blocked out;
13 correct? Correct. Is it anywhere else in the
14 retaining your information? No. Are there paragraphs
15 that are not blocked out? Yes. Would that possibly
16 be new information?

17 You don't banter with him about the answers
18 that he's giving you. The answers that he has given
19 you are the answers that he has given you. You cannot
20 inject functionally your own opinion about which word
21 is right. You can cross-examine him so he adopts it,
22 but you cannot inject your own opinion. Okay?

23 MR. PRICE: Yes, Your Honor.

24 BY MR. PRICE:

25 Q I would just like to turn your attention to the

McGRIFF - DIRECT

321

1 language that says "When you delete your data, you
2 follow a deletion process." Do you see that there?

3 A Yes.

4 Q It says, "We follow a deletion process to make
5 sure that your data is safely and completely removed
6 from our servers or retained only in anonymized form";
7 is that correct?

8 A Yes.

9 Q And when it says "retained," that's a little bit
10 different than "deleted," isn't it?

11 A That somehow the transformed data is retained.
12 There's a subtle difference there. It notes that it's
13 only an anonymized form.

14 Q So it gets deleted through the deletion process
15 but retained in anonymized form?

16 A The privacy policy is the privacy policy for
17 Google. For Location History, it is deleted. This is
18 generalized to speak to the company-wide policies and
19 practices. In the case of Location History
20 specifically, it is deleted.

21 Q So it's deleted from the Location History
22 database?

23 A That's correct, yes.

24 Q But it's retained in a different database?

25 A No, that's not correct.

McGRIFF - DIRECT

322

1 Q In anonymized form?

2 A No. So, this policy speaks to Google's broader
3 company-wide policies. What this is specifically
4 noting is that in the deletion process, some
5 information might be retained in anonymized form.
6 What that's referring to is not explicitly referring
7 to Location History.

8 Location History information is also deleted by a
9 process. There's a single store for that, as
10 mentioned in the last exhibit, Sensorvault. That
11 deletion is permanent and final.

12 Q Where is anonymized data that's retained, stored?

13 A I can't speak to the broader company policy and
14 what specifically they're referring to there. It's a
15 data type that is outside of my scope.

16 Q Okay.

17 MR. PRICE: Your Honor, I would like to admit
18 Defense Exhibit 45, the privacy policy, into the
19 record, into evidence.

20 MR. SIMON: No objection, Judge.

21 THE COURT: All right. It will be entered.

22 (Defense Exhibit No. 45 is admitted into
23 evidence.)

24 THE COURT: I'm going to say a couple things.
25 I'm hearing something.

McGRIFF - DIRECT

323

1 THE WITNESS: I am, too. It's like a radio.

2 THE COURT: Yes. And I want that to stop.

3 What am I hearing?

4 MS. KOENIG: Your Honor, I heard a little bit
5 of something like that yesterday, too, and I'm
6 wondering if perhaps maybe somebody who is on the
7 audio feed may not be fully muted. I'm not sure.

8 THE CLERK: I can mute our mics.

9 THE COURT: No.

10 THE CLERK: Their mic. Not us. Anything
11 coming from that.

12 THE COURT: I'm going to say, if there are
13 folks on the AT&T line who are talking, we can hear
14 you, and it is disruptive. If you're in my courtroom
15 here in person, you're not rude enough to speak over
16 any witness who is testifying. We don't allow it in
17 this court. And I'm going to tell you all, either you
18 pay attention and you listen or you don't. I'm still
19 hearing it. What is it?

20 MS. CARROLL: I'm being told the audio has
21 gone out again on the phone line. So I don't know if
22 maybe they can't hear.

23 THE COURT: Maybe they're talking about the
24 fact that it's gone out.

25 All right. We're going to take a recess and

McGRIFF - DIRECT

324

1 figure this out. I am going to say also, I want
2 counsel table to be a little less vocal. I don't want
3 people commenting on the type of examination that's
4 happening where I can hear it.

5 I don't want -- Mr. Chatrie, you're allowed
6 to speak to your attorney as much as you wish, but you
7 have to understand there are a lot of microphones
8 there, and it becomes background noise.

9 So, Mr. Gill, I'm just going to ask you -- I
10 don't want you not to talk to your client, of course,
11 but you have to step away from the microphones a
12 little bit because it is disruptive to what is
13 happening in our courtroom, and it's not fair to Mr.
14 McGriff or to Mr. Price that he is distracted or that
15 I am, and not looking at the right exhibit because I
16 get concerned about the demeanor and the
17 professionalism with which we're handling this case.

18 So I want somebody to tell the AT&T folks, if
19 you know, then tell them to hush. And I will remind
20 them, but we're going to take a 15-minute recess, and
21 my hope is that we will just get the testimony in
22 efficiently and fairly and without disruption.

23 All right.

24 (Recess taken from 10:10 a.m. until 10:35 a.m.)

25 THE COURT: All right. Well, welcome back.

McGRIFF - DIRECT

325

1 Let me just put on record I'm pretty glad
2 we're not doing this by ZOOM, since we have everybody
3 here and are still experiencing technical
4 difficulties.

5 Can I ask if anybody on the AT&T line can
6 hear me? So that is a no. So let me say this: We
7 cannot let this AT&T line trip us up like this. We
8 are open. I want to accommodate this, but our
9 courtroom is open, and we have a satellite courtroom
10 that we may not be running today because no one showed
11 up yesterday. But if people were to show up, you can
12 come on in. You're welcome to do it. But this is far
13 too many distractions. And it's not anybody's fault.

14 And so I'm going to ask those of you who are
15 in touch with folks, let them know we're just going
16 forward. They're welcome to come on down here and
17 listen and do what they want to do. But this is, you
18 know, we're an hour and 40 minutes into this
19 proceeding, and we've gotten maybe 40 minutes of
20 testimony, maybe 30. It's not appropriate for
21 Mr. Chatrie, for our witnesses, for counsel here.

22 And so I am a fan of the First Amendment, but
23 we cannot let this proceeding be driven by folks who
24 want the courtesy of an AT&T line when we are fully
25 open and operational and they can come in here.

McGRIFF - DIRECT

326

1 I don't know whether or not it's those folks
2 talking. I am going to just ask them not to if they
3 get back on. We have our IT working on it. They're
4 working with AT&T. We have checked. Sometimes our
5 CSOs have walkie-talkies. It sounded a little bit
6 like that to me, but none of them are using them. So
7 I don't exactly know what's happening. It's quite
8 possible there are lines crossing, I would think,
9 because we keep getting jumped off of AT&T.

10 But I want to confirm, especially those of
11 you who have colleagues, that you don't object to our
12 just going through this when your colleagues can't
13 hear it.

14 MS. KOENIG: Your Honor, from the defense's
15 perspective, we are absolutely in agreement that we
16 need to move forward now.

17 THE COURT: All right.

18 MR. SIMON: Likewise, Judge. We're ready to
19 go.

20 MS. CARROLL: Likewise for Google, as well.
21 Thank you.

22 THE COURT: All right. Okay. We'll work on
23 it, but let's be productive. We'll continue the
24 examination.

25 Obviously, Mr. McGriff, you're still under

McGRIFF - DIRECT

327

1 oath. I have to say it every time.

2 BY MR. PRICE:

3 Q Mr. McGriff, I'd like to call your attention back
4 to Defense Exhibit 47. This is the second blog post
5 that you wrote. In addition to adding the auto delete
6 feature, you also wrote in your blog that "It's our
7 goal to help you stay informed about your Location
8 History"; correct?

9 A Yes.

10 Q And you said, "If you have chosen to turn Location
11 History on, you will receive periodic email reminders
12 that let you know what data you are saving and ways to
13 manage it"; is that correct?

14 A Yes.

15 Q And then in your third declaration, which is
16 Defense Exhibit 23, you also wrote about this. You
17 said that Google sent monthly timeline updates to some
18 users; is that correct?

19 A That's correct, yes.

20 Q And one purpose of those updates was to remind the
21 user that the Location History setting is on?

22 A Among other things, yes.

23 Q But Google, again, in your affidavit, pages 8 to
24 9, you wrote that Google has no records reflecting
25 that such emails were sent to Mr. Chatrie.

McGRIFF - DIRECT

328

1 A We do not retain records for that long for emails
2 sent, that's correct.

3 Q So you said that one reason for that "could be
4 because no such emails were sent"?

5 A That is possible, yes.

6 Q But you don't know why?

7 A Again, for the life of the product, we have
8 steadily made improvements. We have steadily expanded
9 the suite of emails that we send related to the
10 product. Because of the way we record the emails that
11 are sent in this context, this is too far back for us
12 to say with certainty which emails were or were not
13 sent for a specific account.

14 Q Thank you. I'd like to turn your attention now to
15 Defense Exhibit 7, the third page. This is a
16 screenshot of the opt-in screen when first setting up
17 Google Assistant. I want to just go through with you
18 here some of the terminology because I feel like we're
19 getting tripped up a little bit.

20 The line -- you've used a few different terms to
21 describe what we're seeing here in terms of text on
22 the screen. But the line right underneath where it
23 says "Location History," in this case it says "creates
24 a private map of where you go with your signed-in
25 devices," that's the descriptive text?

McGRIFF - DIRECT

329

1 A That's the way I would describe it, yes.

2 Q Okay. And if you hit that little triangle next to
3 Location History, that's the expansion arrow?

4 A That's correct, yes.

5 Q And can we go to page 4. If you hit that
6 expansion arrow, then you see what's on that
7 screenshot on the far right-hand side, what you've
8 been calling the copy text; is that correct?

9 A That full block there, that is the Location
10 History consent, yes.

11 Q So you call that the Location History consent?

12 A That is the consent copy, yes.

13 THE COURT: Wait. Are you on page 3 or 4?
14 Is this where we --

15 MR. PRICE: This is Figure 3, and I believe
16 it's on page 4.

17 THE COURT: It's on page 3.

18 MR. PRICE: Page 3, I'm sorry. Yes, page 3.

19 BY MR. PRICE:

20 Q So that block of text, that's the consent copy
21 text?

22 A It's the Location History consent, yes.

23 Q The Location History consent. Okay. So then can
24 we go down to the next screenshot, please, on page 4.
25 Further down.

McGRIFF - DIRECT

330

1 So, what -- do you see those buttons? One says

2 "No, thanks" and one says "Turn on"?

3 A Yes.

4 Q What are those called?

5 A That is how a user would accept what's above. So
6 their dynamic. As you did in the previous figure, you
7 showed when a user first lands on that screen, you
8 can't turn it on from that screen alone. Your options
9 as the figure shows are "Skip" or "Next". If the user
10 says "Skip," they are skipped. They won't see the
11 subsequent screens. If the user says "Next," then
12 they're shown what you highlighted in Figure 3. And
13 then if the user scrolls down, they will see the "No,
14 thanks" or "Turn on." So those buttons are dynamic.

15 Q And the only way that you see the consent copy
16 text is if you click on that expansion arrow; right?

17 A That's correct, the expanded copy, that's right.

18 Q So you don't actually have to see it in order to
19 hit "Turn on"?

20 A You have to scroll to the bottom to click "Turn
21 on," yes.

22 Q But you don't have to see the consent copy text?

23 A You don't have to expand it there, no.

24 Q And this whole process, is that referred to as the
25 consent flow?

McGRIFF - DIRECT

331

1 A That is a consent flow, yes.

2 Q So this process is a consent flow?

3 A That is a consent flow, yes.

4 Q Thank you for clarifying that.

5 The text -- if we could go to the screen that
6 shows the consent copy text, please. Thank you.

7 So this text that you see here, that's consistent,
8 in fact, the same as the text that you provided in
9 your third declaration; correct?

10 A Yes. Yes, it is.

11 Q Okay. But it looks a little bit different in
12 screenshot form than it does in plain text. Would you
13 agree with that?

14 A What do you mean?

15 Q Well, laid out like this in this format, you know,
16 with the copy text hidden behind the expansion arrow,
17 it looks different than just writing out the text on a
18 piece of paper; correct?

19 A This is, again, a fully dynamic flow. So, yes, it
20 looks very different when you freeze on individual
21 screens and break it out in this way, yes.

22 Q So, could we go down to the "Turn on" button. So
23 the "Turn on" button there is highlighted in blue by
24 default?

25 A So, it starts off not visible, but once the user

McGRIFF - DIRECT

332

1 interacts with the page and scrolls to the bottom,
2 yes, that button appears in blue.

3 Q And the "No, thanks" button is not highlighted in
4 blue. It kind of blends in there?

5 A The "No, thanks" button is not captured in a blue
6 box, no.

7 Q Thank you. And this consent flow for Google
8 Assistant, this looks different than the consent flows
9 that you provided in your third declaration for Google
10 Maps; correct?

11 A Again, in any of my declarations, I never
12 attempted or suggested that I was presenting an
13 exhaustive exploration of all of our opt-ins.

14 Q Understood. It looks different from the consent
15 flow that you showed for Google photos as well;
16 correct?

17 A This is a variation on a theme of that flow,
18 that's correct, yes.

19 Q And this variation, instead of asking the user to
20 just enable Location History, there are two other
21 permissions on the screen; is that correct?

22 A Again, this flow is dynamic. So if a user saw
23 the -- in your Figure 3, in this exhibit, if a user
24 saw the prompt to set up Assistant, if the user
25 skipped, they would see none of the subsequent

McGRIFF - DIRECT

333

1 screens. If the user said "Next," they would then see
2 whichever permissions they had not already consented
3 to for the account that were required for this
4 particular feature. That is unique to this particular
5 flow, that is correct.

6 Q So if you're setting up Google Assistant for the
7 first time, and you have never enabled Location
8 History, you've never enabled device information, and
9 you've never enabled Voice & Audio Activity, you would
10 see all three permissions on this one screen?

11 A At that time, that was the case, yes.

12 Q If you would say "already enabled device
13 information" for some other reason, it wouldn't show
14 up here?

15 A That is correct, yes.

16 Q If I had enabled device information and Voice &
17 Audio Activity, it would only show, say, Location
18 History?

19 A Correct. If you had not previously opted in to
20 Location History, yes, that's correct.

21 Q When you group permissions like this together on
22 one page, it's called bundling; right?

23 A I don't know what its official term would be. I
24 casually, yes, do often refer to these as a bundled
25 presentation, yes.

McGRIFF - DIRECT

334

1 Q And bundling can make users share information that
2 they otherwise wouldn't; correct?

3 A I don't know that that's true.

4 Q Well, if a user doesn't agree to everything here,
5 then Google would block off access to Google
6 Assistant?

7 A I don't believe this would prohibit or prevent a
8 user from using Google Assistant.

9 Q So you're saying it's possible to enable Google
10 Assistant without -- enable Google Assistant for the
11 first time without enabling all three of these
12 permissions?

13 A I am not the assistant PM, but I don't believe you
14 would be -- I couldn't say that that service would
15 completely block you if you did not consent to all of
16 these.

17 Q If you click "Turn on," then it enables all three;
18 correct?

19 A If a user went through the flow and scrolled to
20 the bottom, yes, they would be able to turn on and
21 enable all three, that is correct.

22 Q And the only other option is "No, thanks"?

23 A "No, thanks," that's correct.

24 Q And if the user clicks "No, thanks," is Assistant
25 set up?

McGRIFF - DIRECT

335

1 A From this particular flow and these screenshots,
2 the user could skip it entirely. The user could
3 scroll through and say "Turn on" or the user could
4 scroll through and say "No, thanks". I am not the
5 assistant PM, and I do not recall what restrictions
6 they had on usage. I would be surprised if you
7 weren't able to use it at all, but, again, I'm not the
8 assistant PM.

9 Q But you would agree if you clicked "No, thanks,"
10 Assistant will not be set up at that time; correct?

11 A It may not be completely set up, but, again, I
12 would be surprised that would you be blocked from
13 using the feature.

14 Q Does it say that on this page anywhere?

15 A Say what specifically?

16 Q That it might be possible to use the feature
17 without clicking "Turn on"?

18 A It does not say -- again, this is a dynamic
19 screen. So it would appear different for the user
20 based on whatever their account configuration was. It
21 is possible that a user approaching this screen, for
22 example, had already consented to device information
23 and Video & Audio Activity, in which case they only
24 saw Location History. I am not the assistant PM. I
25 don't recall that Assistant would have blocked you if

McGRIFF - DIRECT

336

1 you said no.

2 Q Well, you could set it up later, of course; right?

3 A You could set it up at a different point.

4 Q But you'd see the same screens, the same consent
5 flow?

6 A That I couldn't say. I am not an expert on
7 Assistant.

8 Q You would agree that Location History here is an
9 account level setting? That means if you enable it
10 here, it is enabled for all devices across your entire
11 account?

12 A No. If you opt in to Location History here,
13 Location History and Location Reporting would be
14 enabled on that specific device. But if you were
15 signed into multiple other devices, Location Reporting
16 would not be enabled on those devices. So their
17 Location History was on for the account. Those
18 devices would not actively be contributing to your
19 Location History.

20 Q But if you had one device, and you turned it on in
21 this way, it would be on for everything on the phone;
22 correct? On that device?

23 A Yes, if a user opted in to Location History
24 through this context at this point in time, July 2018,
25 Location History would have been enabled on their

McGRIFF - DIRECT

337

1 account. And with that, seven days later on that same
2 device, they would see the warm welcome, as we call
3 it. Everything would have been enabled on that
4 device, yes.

5 Q So it doesn't have to be an account level setting,
6 does it? In other words, it's possible to have
7 Location Reporting only for apps that are actively
8 using a user's location? This is the way that an
9 iPhone does it, for example.

10 A I'm not sure that I follow that.

11 Q iPhone users can choose to give an app permission
12 to use location services only when the app is in use.
13 Are you familiar with that?

14 A I believe you're conflating Location History with
15 location services. The same is true on an Android
16 device. A user can choose which app has access to
17 location on the device. Those are the app level run
18 time permissions, yes.

19 Q So on an iPhone, you can restrict it to one app or
20 another?

21 A On both Android and iPhone, and I believe every
22 other phone manufacturer, you can restrict location
23 access at the app level, that is correct.

24 Q And Location History specifically?

25 A Location History is not location services for the

McGRIFF - DIRECT

338

1 device.

2 Q Correct, but I'm asking you about Location
3 History.

4 A But you're making a false equivalency with what's
5 happening on an iPhone. On both iPhone and Android,
6 there are runtime permissions that control whether or
7 not an app has access to location in the background.

8 On both iPhone and Android, a user can decide
9 whether or not an app, a specific app, has access to
10 the location in the background or only in the
11 foreground. Those are app level permissions. They
12 are not tied to Location History.

13 If a user enables Location History for the
14 account, in the context of Android specifically, that
15 information is collected and stored and used in
16 Location History at the account level.

17 Individual apps can access Location History
18 information, but by policy we do not allow those apps
19 to use Location History as a workaround, for example,
20 for current location.

21 So, if a Maps user says "no, Maps, you cannot have
22 my location permission," Maps cannot call Location
23 History and say, Tell me where this user is. Yes.

24 Q Okay. Thank you for clarifying.

25 We talked about this a second ago a little bit,

McGRIFF - DIRECT

339

1 but if a user goes through and sets up Google
2 Assistant in this way, and then later goes and pauses
3 Location History, Google Assistant will still continue
4 to function; correct?

5 A Yes, that is correct.

6 Q But Google doesn't inform the user at the consent
7 flow stage that that is a possibility; correct?

8 A Again, the consent flow is dynamic. So a user may
9 or may not be presented, depending on their own
10 account activity prior, with any of these options in
11 the menu. So what is presented to the user in the
12 context of seeing this specific flow would, again, be
13 based on the user's previous activity across Google
14 products and services.

15 Is the ask to generalize, then, across all users?

16 Q No, no. I'm actually asking if you can point me
17 to where in the consent copy text it says that the
18 feature, in this case Google Assistant, would still
19 function even if you pause Location History.

20 A I don't see in the copy text that it either says
21 the feature will or will not work if the user does not
22 proceed with any of the steps, the various options of
23 this flow.

24 Q To pause Location History, you can only do that
25 once you've enabled it through the settings panel;

McGRIFF - DIRECT

340

1 right?

2 A What are you referring to as a settings panel?

3 Q The settings app on an Android phone.

4 A Are you referring to a specific point in time or
5 just generally?

6 Q After it has been enabled.

7 A So, after Location History has been enabled at the
8 account level, the user can go through the settings on
9 any particular app that uses Location History, so it
10 has Location History powered features. The user could
11 go through the device level settings on an Android
12 device, and the user could also go to
13 myactivity.google.com where they can view all the
14 activity controls and suspend it there.

15 So you can either do it directly on the device at
16 the settings level through an app on a device, any
17 device that you're signed into, or on a desktop, any
18 laptop, myactivity.google.com and make a change there.

19 THE COURT: So, Mr. McGriff,
20 myactivity.google.com is really familiar to you, but
21 my bet is it's really hard to transcribe as quickly as
22 you say it, especially with all the dots and stuff.
23 And using phrases like "I'm not the PM," just presume
24 that not all of us knows what a PM is. So I'm going
25 to ask you to clarify that. I think I know what it

McGRIFF - DIRECT

341

1 is, but especially with things you're super familiar
2 with, those things come out fast from any human being.
3 And I'm just speaking on Ms. Daffron's behalf.

4 THE WITNESS: Got it. For reference, "PM"
5 is product manager. So I'm not one of the assistant
6 product managers. And the site specifically I've been
7 referring to as myactivity.google.com is the main
8 settings page where you can view all of your account
9 level settings and manage them, and that can be done
10 either through a mobile browser or on a desktop.

11 BY MR. PRICE:

12 Q So a user would have to actively, intentionally
13 navigate to that, settings, either through the app,
14 through the settings panel, or through that website
15 that you just gave us?

16 A That's correct.

17 MR. SIMON: Judge, I think the answer's fine
18 because he said yes, but I was going to ask to break
19 that down because there are a number of different
20 topic areas there in that question.

21 THE COURT: You mean, it's a compound
22 question?

23 MR. SIMON: Correct, Judge. My apologies.
24 That would be the objection, compound question.

25 THE COURT: It also seems to repeat what the

McGRIFF - DIRECT

342

1 witness was saying. But are there more than three
2 ways to change the Location History setting other than
3 the three you just talked about?

4 THE WITNESS: Those are three paths, the
5 three paths that would be possible, yes.

6 MR. PRICE: Thank you.

7 BY MR. PRICE:

8 Q So, if a user takes one of those paths and they
9 find the setting to pause Location History, Google
10 provides a pop-up screen at that point; right?

11 A There is a screen that explains -- there's a
12 screen that explains what is happening with that pause
13 of the service, yes.

14 Q Thank you. Could I draw your attention, please,
15 to Defense Exhibit 27, specifically pages 22 to 23.

16 THE COURT: I'm sorry. Remind me of the
17 exhibit number again, please.

18 MR. PRICE: Exhibit 27, Your Honor.

19 THE COURT: How about you put on the record
20 what we're looking at aside from the number, please.

21 Q Mr. McGriff, can you tell us what --

22 THE COURT: No, you can just put it on. It's
23 already in evidence.

24 MR. PRICE: Sorry. This is Defense Exhibit
25 27 at page, I believe, 23. And this is the screen

McGRIFF - DIRECT

343

1 that pops up if you attempt to --

2 THE COURT: I mean name the article, sir.

3 I'm sorry. I'm not being clear.

4 MR. PRICE: Oh, I'm sorry. This is the
5 report from the Norwegian. It's called "Every Step
6 You Take."

7 THE COURT: All right. There we go.

8 BY MR. PRICE:

9 Q Is this the screen that would come up if you
10 successfully found a place to turn Location History --
11 to pause Location History?

12 A In any of the numerous paths that a user could
13 take to pause the setting, yes. This would be the
14 pause copy that appeared at that time, that's correct.

15 Q Great. So attempting to pause the service results
16 in this warning that says it "limits functionality of
17 some of Google's products over time, such as Maps and
18 Google Now"; is that correct?

19 A That is correct.

20 Q But there isn't a comprehensive explanation of all
21 the services that would be affected; correct?

22 A That is correct, yes.

23 Q It just mentions those two. It doesn't mention
24 Assistant?

25 A This was not meant to be exhaustive, that's

McGRIFF - DIRECT

344

1 correct, yes.

2 Q And it doesn't explain actually how the
3 functionality would be limited for any of those
4 specific apps?

5 A As mentioned previously, Location History is used
6 and in quite a few products and services and what
7 would be impacted would be wholly dependent on what a
8 specific user was utilizing in their sort of
9 experience across Google products and services. The
10 copy here is not meant to be exhaustive or describe
11 what every user would experience in terms of change in
12 service, because that would be near impossible. The
13 screen would have to be -- well, not impossible. The
14 screen would have to be dynamic and specifically say
15 what was happening in that case.

16 In this case, it's clearly illustrated. It just
17 has, you know, these would be impacted, such as these
18 would be impact services.

19 Q But it does not say how the functionality would be
20 limited?

21 A It does not explicitly say that, no.

22 Q Okay. Thank you.

23 I'd like to take a closer look at some of the
24 screenshots for this consent flow process for
25 Assistant. If we could turn to Defense Exhibit 7 at

McGRIFF - DIRECT

345

1 page 4 again, please.

2 MR. PRICE: Can we show the one with the
3 copy.

4 BY MR. PRICE:

5 Q So this is page 3 of Defense Exhibit 7. And, once
6 again, we have the descriptive text in the Location
7 History that says "Saves where you go with your
8 devices"; correct?

9 A That's correct, yes.

10 Q And then the consent copy text on the right-hand
11 side.

12 A That's correct, yes.

13 Q That can only be viewed by clicking that expansion
14 arrow?

15 A That is correct, yes.

16 Q So it requires extra clicks, at least one, here to
17 learn, for example, that your Location History data is
18 saved with Google and not on your phone?

19 A Location History is only available through Google.
20 Who else would it be saved with?

21 Q Well, the descriptive text says "Saves where you
22 go with your devices"; correct?

23 A Sorry. Is the suggestion that the descriptive
24 text is suggesting that it's an on-device feature?

25 Q I'm saying it does not specify one way or the

McGRIFF - DIRECT

346

1 other, does it?

2 A I apologize. I don't believe any of our settings,
3 any of the controls mentioned here explicitly say --
4 make a distinction of server versus on device.

5 Q I understand that that is how it works now, but as
6 a user, where would the user find that information on
7 this page?

8 A Just to be sure that I'm clear, you're asking
9 where would a user know that this information is being
10 saved with Google on Google servers versus on the
11 device locally?

12 Q Correct.

13 A That is not a distinction that is made on this
14 page, no.

15 Q It's made on the next page, on the consent copy
16 page?

17 A That is not a distinction of note in the consent
18 copy. It is there, but it is not in any way meant to
19 like -- the distinction of whether data is stored on a
20 device locally or on the server is -- I apologize. I
21 don't know how to respond to that. It is more -- it
22 is noted in the consent copy, yes.

23 Q Okay. But not in the descriptive text?

24 A No.

25 Q Similarly, it would require an extra click here on

McGRIFF - DIRECT

347

1 that expansion arrow to learn that data is being saved
2 even when you aren't using a specific Google service;
3 correct?

4 A On this page, yes.

5 Q And it requires an extra click, same one, for a
6 user to learn that location data is sent to Google
7 even if the internet connection becomes disabled?

8 A Sorry. What are you referring to? Oh, I see.
9 Sorry. Yes, that is correct.

10 Q Thank you very much.

11 So that consent copy text also says some things
12 like Location History helps give -- helps Google give
13 you more personalized experiences; right?

14 A Yes.

15 Q Like a map of where you've been?

16 A Yes.

17 Q Tips about your commute?

18 A Yes.

19 Q Recommendations based on places you visited?

20 A Yes.

21 Q And useful ads?

22 A Yes.

23 Q Those are all positive things from Google's point
24 of view; correct?

25 A Yes.

McGRIFF - DIRECT

348

1 Q They're intended to explain why users might want
2 to enable Location History?

3 A That's correct, yes.

4 Q But there isn't any mention here about how
5 frequently Google collects Location History
6 information, is it?

7 A There is no statement here about the frequency of
8 collection, that is correct, yes.

9 Q And there's no mention of the quantity of location
10 records that Location History generates; correct?

11 A There is no statement here, no, that's correct.

12 Q And there's no mention in that consent copy text
13 that Assistant will work without Location History
14 enabled?

15 A There is no mention that any of the products or
16 features mentioned here will work without the setting
17 enabled, that is correct.

18 Q Thank you. So let me shift gears a little bit.
19 Let's say I'm a user who does not want to have
20 Location History enabled on my device. To keep
21 Location History off, I have to go through a bunch of
22 different steps, starting from the beginning, the
23 initial setup of the phone; correct?

24 A Again, the majority of users do not have Location
25 History enabled. For those users who have Location

McGRIFF - DIRECT

349

1 History enabled, yes, to turn it off, they can take
2 any of the numerous paths I mentioned before, yes.

3 Q No, I guess what I'm saying is it starts off as
4 off. The default when you start up a new phone is
5 off; correct?

6 A Location History -- well, Location History is an
7 account level setting. Yes, it's an account level
8 setting, and it is off by default.

9 Q The default is off when you start up a phone, but
10 at least in 2019, the very first thing that would
11 happen after you went through the initial setup and
12 agreed to the terms would be a prompt to enable
13 Location History; correct? Sorry. A prompt to enable
14 Google Assistant; correct?

15 A In 2019?

16 Q I'm sorry. July of 2018.

17 A In 2018, at the beginning of the year, yes, if you
18 set up Google Assistant, you would be presented with
19 the Location History consent if you had not already
20 opted into the service, yes.

21 Q After you do the initial setup of the phone, that
22 screen, "Meet your Google Assistant," comes up
23 immediately or came up immediately in 2018?

24 A I cannot speak to exactly when that appears in
25 device setup or under what circumstances. But

McGRIFF - DIRECT

350

1 assuming a user got to this screen, yes, this would
2 have been the flow, that's correct.

3 Q And, obviously, this prompts the user to enable
4 Location History?

5 A This particular flow, yes, it does.

6 Q So, in order to keep Location History off, the
7 user would have to skip the step and decline enabling
8 Location History?

9 A Which, again, the majority of Google accounts do
10 not have Location History enabled.

11 Q Okay. After that initial setup process, during
12 the first use of some applications, there's also a
13 prompt to enable Location History; correct?

14 A For some products that have Location History
15 powered features, yes, that's correct.

16 Q So, for example, Google Maps, the first time I
17 open up Google Maps with my new setup phone, it's
18 going to ask me to enable Location History; correct?

19 A Under some set of circumstances in the context of
20 Google Maps at that time a user would have been
21 prompted. The notification was -- there's a
22 notification priority and depending on the user's
23 activity and behavior, the user may or may not have
24 seen that notification, but, yes, it was a
25 possibility.

McGRIFF - DIRECT

351

1 Q So, then, to keep Location History off, I would
2 have to decline activating it through Maps, as well;
3 right?

4 A That is correct.

5 Q And the same thing with Google Photos; correct?
6 The first time you open Google Photos, there's a
7 prompt to enable Location History for Google Photos
8 Places; is that correct?

9 A I'm not aware that that was featured in the same
10 way that it was featured in Maps, but for both, again,
11 I would say yes, presented as an option, which the
12 majority of our users do not opt into.

13 Q So, again, if I wanted to keep Location History
14 off, I would have to decline the invitation to turn it
15 on when using Photos for the first time?

16 A Yes. The majority of our users would have
17 declined that, yes.

18 Q And long pressing the home button on an Android
19 phone, that would also bring up the Google Assistant
20 app; correct?

21 A In 2018, I believe so, yes.

22 Q And so if a user hadn't enabled Assistant during
23 that initial setup process, they would be prompted to
24 do it when they pressed the home button with the long
25 press?

McGRIFF - DIRECT

352

1 A I don't know under what circumstances a user would
2 see this specific Assistant flow. Specifically, as
3 mentioned before, I'm not sure -- I can't say that
4 this specific flow would be the one shown at a
5 subsequent point.

6 Q But there would be -- if Assistant is not set up,
7 the first time it comes up, you would see these
8 screens; correct?

9 A I couldn't say definitively, actually.

10 Q Okay. In any event, to keep Location History off
11 from the beginning, a user would have to say no
12 multiple times; correct?

13 A No, it would depend entirely on what a user's
14 activity actions, and across Google products and
15 services.

16 Q So the user would have to decline the invitation
17 to set up Google Assistant initially; correct?

18 A Assuming that a Google user saw that, yes.

19 Q The user would have to decline the invitation when
20 opening Maps for the first time?

21 A If the user was prompted with that opt-in flow,
22 then yes.

23 Q And the user would have to decline it when using
24 Google Photos for the first time?

25 A Again, across all products, that user Location

McGRIFF - DIRECT

353

1 History, if a user was prompted contextually to opt-in
2 with a Location History powered feature, then yes, the
3 user would be presented with the option to say yes or
4 no.

5 Q Then, again, if Google Assistant came up for some
6 reason, perhaps a long press of the home button, they
7 would have to decline the invitation to set it up
8 then, too; right?

9 A That's the one I'm not sure about. I can't say
10 whether or not Assistant had the same flow for that
11 same type of behavior at that point.

12 Q So, at least three times, maybe four?

13 A No. Again, I disagree. A user may not -- what a
14 user is presented with would depend entirely on the
15 user's behavior. Not every user uses Google Maps.
16 Not every user uses Google Photos. So it is very
17 possible that a user saw -- for example, this flow
18 would have required the user to have a connection.
19 The user may have set up their device with no
20 connection, in which case they wouldn't have been
21 presented with the Assistant flow.

22 Device and their connection could mean no send, no
23 Wi-Fi, but in that scenario, the user would have seen
24 none of these prompts.

25 A user could have gone through this initial flow

McGRIFF - DIRECT

354

1 and then never opened Google Maps and then never
2 opened Photos. They wouldn't have seen the other
3 ones.

4 So I can't say that a user -- the number of times
5 definitively that any user would have seen any of
6 these prompts, but I can say yes, these would have
7 been the prompts that were available at that time.

8 Q So, a user who did use Google Maps and Google
9 Photos would have been prompted in this way at least
10 three times; correct?

11 A Could have been prompted. Again, all of these are
12 dependent on the user's activities. There are more
13 important things happening in Maps, for example. So
14 if you are in an active navigation session shortly
15 after first opening Maps, no, Maps would not prompt
16 you with any opt-in request because you are in the
17 active task completion mode. The prioritization of
18 that screen would have been too low to warn it to be
19 triggered at that time. So it is a potential option,
20 but it's impossible to say to what percentage of users
21 and what flow and so forth.

22 Q So it's at least possible that a user would have
23 to decline the invitation to enable Location History
24 multiple times in order to keep it off?

25 A Yes, it is possible that a user would have seen

McGRIFF - DIRECT

355

1 the option to opt-in multiple times, yes.

2 THE COURT: I'm pretty sure we've covered
3 that territory multiple times. Let's move on.

4 BY MR. PRICE:

5 Q Does this increase the chances that a user might
6 turn on Location History by accident?

7 A It is always possible that a user goes through a
8 flow, might not fully understand or wants to revisit.
9 For that exact reason, in 2017, we introduced what we
10 call the warm welcome notification for any user who
11 opted in to Location History from Q4 2017 on, we
12 triggered a notification in Maps. It triggered seven
13 days later.

14 Seven days was chosen because we thought at that
15 point we would have sufficient context of a user's
16 activity from a week since turning on the control.
17 And the notification said -- again, it was the warm
18 welcome. Hey, Location History is on for your
19 account. Any interaction with that notification
20 brought the user into Timeline where the user would be
21 able to view all the information that we had
22 collected, including the activity, the trips, the
23 places.

24 The hope in introducing that was that even if a
25 user didn't have full context or full understanding

McGRIFF - DIRECT

356

1 about the points you've previously made, the
2 granularity of the information, or the type of
3 information, that the collection was happening
4 passively, like, for example, while driving, that we
5 understood the nuance of activity recognition.

6 The visualization in the Timeline UI, user
7 interface, was very explicit and clear. So that warm
8 welcome notification was so that a user would see it
9 seven days later, click through, see in full context,
10 and might say, This is not what I intended. Turn the
11 control off. There you can access again through the
12 app Timeline. You can turn Location History -- you
13 know, pause Location History there.

14 The user could also -- we present a full suite of
15 controls. This is well before auto delete. But at
16 the time we had delete by day, delete by data range.
17 All of those controls were made available in the
18 context of Timeline.

19 Again, because every product is steadily evolving,
20 I realize some users would not see the notification.
21 So we now send a warm welcome email. So, again, this
22 speaks to that suite of emails that we send. So seven
23 days after turning Location History on, we now send an
24 email in addition to the warm welcome email notice
25 because not every user will see the maps notification.

McGRIFF - DIRECT

357

1 Again, not every user uses Google Maps.

2 So the thought was if you had turned on Location
3 History in a different context, you may not see the
4 Map specific notification. So now we send the email
5 with that exact same content.

6 That email features prominently at the top direct
7 links to turn Location History on or off. And in that
8 email, we specifically provide a snippet or insight
9 into the data that's been collected for the first
10 seven days that the user has had the control on.

11 Again, this is all to address the point you're
12 making, that a user might turn it on, and then either
13 not realize the scope or exactly what's collected, and
14 we wanted to provide that additional context.

15 Q Thank you. I just wanted -- that was a long
16 answer. It is the case, based on what you just said,
17 with some qualifications that --

18 MR. SIMON: Judge, I'm going to object to a
19 continuation of asking the witness to speculate about
20 possible accidents. But I also think this is, again,
21 going to be a question preemptively that's been asked
22 and answered.

23 MR. PRICE: I would just like to get a yes or
24 no to my question, because I appreciate Mr. McGriff's
25 answer, but I would really like --

McGRIFF - DIRECT

358

1 THE COURT: You may have one follow-up and
2 not, well, how many -- what's the percentage of
3 accidents that could happen? Is it three accidents,
4 because there's three different ways to turn it off?
5 You may ask one follow-up question.

6 BY MR. PRICE:

7 Q Requiring users -- or if a user had to repeatedly
8 decline the invitation to enable Location History,
9 would it increase the likelihood of enabling it by
10 accident?

11 A No.

12 Q Repeatedly asking somebody to turn it on --

13 THE COURT: I'm going to let him have this.
14 This is just cross-examination, Mr. Simon.

15 A The reason I say no is the Maps, for example,
16 prompt that you're mentioning, we only triggered it --
17 I believe that logic was twice per user. If the user
18 either abandoned, didn't respond, we would show it one
19 more time. If the user just missed it, we would never
20 prompt them again.

21 In each of these, again, the goal is not to spam a
22 user relentlessly. You want this on. You want this
23 on. So we do have controls in place to ensure. And,
24 again, it's very nuanced. It's not -- you know, if
25 you happened to see it but didn't respond, we'll show

McGRIFF - DIRECT

359

1 you again in a certain period of time. It wouldn't
2 have been the next day. There is logic behind this
3 that would say, depending on the product, don't show
4 the user this prompt again for 10 weeks or however
5 many months, until later.

6 Then there's also logic that says if you showed
7 the user and the user explicitly said no, do not show
8 the user again.

9 The logic varies by app and context, but we go out
10 of our way to ensure that we are not doing what you
11 suggest, of just pomeling and pomeling. There is some
12 logic baked in that would stop it. And this is at the
13 account level.

14 So signing in to a new device would not suddenly
15 restart all of those triggers.

16 Q Google did realize it was a possibility, though,
17 correct? That's why you sent the reminder email, for
18 example?

19 A The possibility that someone might turn it on?

20 Q By accident.

21 A No. Sorry. I apologize. No. It was the
22 possibility that someone might turn it on and not
23 fully either understand the granularity of the data
24 that's being collected or simply just wouldn't know at
25 that time necessarily, and we wanted to make sure and

McGRIFF - DIRECT

360

1 reinforce that a user had full visibility into what
2 exactly we were collecting and how that information
3 was being processed.

4 Q Remind me. When did you start sending those
5 emails a week later?

6 A The warm welcome notices started in 2017. The
7 warm welcome emails, I'd have to check. I believe, in
8 my declaration, we put a date in for the Timeline
9 monthly emails, which we sent to users every month.
10 So if you turned Location History on in any context,
11 regardless of the surface, we sent you the Timeline
12 email. And I don't recall the exact date, but it's in
13 one of my declarations that said when those emails
14 started.

15 The warm welcome email, which we added on top of
16 that, I'd have to check to see when we introduced
17 that. It was not -- I can say definitively it was not
18 in 2018.

19 Q Not in 2018?

20 A It was not in 2018.

21 Q Thank you. Once Location History has been
22 enabled, there's an option to pause it; is that
23 correct?

24 A Yes.

25 Q But there isn't an option to turn it off; correct?

McGRIFF - DIRECT

361

1 A We use the language "pause," not "off," that's
2 correct.

3 Q In a user pauses Location History, does it delete
4 existing data?

5 A It does not, no.

6 Q It only halts the collection of future data?

7 A That is correct, yes.

8 Q So if a user wanted to revoke consent to use past
9 Location History data, pausing it would not do the
10 trick?

11 A That is correct, yes.

12 Q And the process of deleting the historical
13 Location History data is completely separate from the
14 act of pausing Location History; correct?

15 A That is correct, yes.

16 Q And as we were talking about earlier, that data
17 may be retained in some anonymized form even if
18 deleted?

19 A Yes.

20 Q One last question for you here. If the user
21 deletes the Assistant app after setting it up through
22 this consent flow, Location History stays on; correct?

23 A Assistant is not an app in this context. It was
24 not an app in this time frame. So I don't believe
25 there's a process to delete Assistant. But if a user

McGRIFF - DIRECT

362

1 were to stop using Assistant, Location History would
2 still be enabled, yes.

3 Q And Google would continue to collect Location
4 History data even if the user stopped using Assistant
5 completely or attempted to get it off his phone?

6 A Yes.

7 MR. PRICE: No further questions. Thank you.

8 THE COURT: I have some questions, and I'll
9 allow you to address them on redirect, but I'm going
10 to ask them before the government starts because that
11 will be more efficient. All right? So you may have a
12 seat. Thank you, Mr. Price.

13 MR. PRICE: Thank you, Your Honor.

14 THE COURT: I just want to understand,
15 generally, Mr. McGriff, a couple of things. And maybe
16 you know the answer and maybe you don't. Either way
17 it's fine.

18 So if Location History, say, is paused and
19 then reactivated, is the data that was collected or
20 retained during the pause time put back into Location
21 History database? So, like, if you had a timeline,
22 and I'm talking about 2018, about this time, if you
23 had a timeline, would it be a blank or would it dump
24 back in?

25 THE WITNESS: It would be a blank. When you

McGRIFF - DIRECT

363

1 pause Location History, our collection is fully paused
2 at that time immediately. So there would be no
3 information until you resume the service.

4 THE COURT: Right. So --

5 THE WITNESS: It would be a blank.

6 THE COURT: It would be a blank. It might be
7 in the Sensorvault some way anonymized?

8 THE WITNESS: There's no collection
9 whatsoever in Sensorvault during the time that the
10 control is paused. All of the data in Sensorvault is
11 exclusively collected in the context of Location
12 History. So when you pause the setting, we stop all
13 collection, and there's no additional storage in
14 Sensorvault for that period. So you would have a
15 blank until collection resumed.

16 THE COURT: Not even anonymized?

17 THE WITNESS: Anonymized here is a bit of a
18 red herring. Because this was -- that's a general
19 privacy policy for the company. In the context of
20 us -- sorry. In the context of Location History,
21 there would be no collection in any capacity in any
22 way if the control is paused.

23 THE COURT: So when you hit the control, it
24 stops the passive collection like when your phone --
25 it stops it all?

McGRIFF - DIRECT

364

1 THE WITNESS: Any location collection in the
2 context of Location History is completely stopped.

3 THE COURT: And it's not reaccessed ever?

4 THE WITNESS: It is not, no.

5 THE COURT: So this is a weird question, but
6 Google tracks a lot of data. Do you track how many
7 people actually read the privacy policy, like how long
8 the window is open? And, you know, I'm just saying
9 because I think most people don't, but I'm wondering
10 if -- that's not evidence, obviously, and I'll take
11 whatever evidence I have. But Google tracks a lot of
12 stuff, so I'm wondering if you track when the window
13 is up or if you know how many people actually read it.

14 THE WITNESS: I don't know. There are teams,
15 not my team specifically, that look very broadly on
16 the best way to present the flows. And they look at
17 any number of signals, including user research, to
18 understand how much of these flows users embrace.

19 I can say based on that research, again, not
20 done directly by my team, we have even further refined
21 since this flow. There have been now two iterations
22 of a presentation based on that feedback.

23 The latest flow, for example, if you were to
24 attempt to opt in to Location History through one of
25 these products, we no longer even do full screen

McGRIFF - DIRECT

365

1 because of feedback that it takes users out of
2 context. So we now have what we call the bottom sheet
3 where the same copy and messaging appears, but it
4 comes up from the bottom. So the user can see above
5 the context where they attempted some activity that
6 triggered it, and then the dialogue comes up from the
7 bottom.

8 That implementation, I believe, is fully
9 rolled out now, but it has been in flight. Again,
10 these iterations are all informed by user research
11 that that central team is doing around what would help
12 users better understand. So this is a constant
13 evolution.

14 THE COURT: Right. So let's talk about
15 Location History. Like, do you track how many people
16 hit the carrot, the triangle, to go to the bigger
17 screen?

18 THE WITNESS: Our team does not, no.

19 THE COURT: Right. So when you're saying
20 there's something that comes from the bottom, would
21 that possibly be something like the Location History
22 context that would come up?

23 THE WITNESS: Yes. So, now, like, again,
24 this is new UI. It was not at the time of this. The
25 bottom sheet comes up. It shows -- the same copy, I

McGRIFF - DIRECT

366

1 believe, it shows more of it now. Again, it's all the
2 way to not fully take over the screen, so the user
3 stays in context. Like you were just attempting to
4 view historical places in Maps, but you don't have
5 Location History on. So where before, and I believe
6 it's in these exhibits, you would have seen a screen,
7 a full splash, Hey, turn it on.

8 We now leave you in the context, You were
9 attempting to do this, but here is where -- and
10 there's still a carrot there, I believe -- I will have
11 to check -- where a user can view more. But, yeah,
12 that's the expansion.

13 And then, again, the evolution here is now if
14 a user did say yes in that context, then seven days
15 later we also, in addition to the notification, send
16 the email saying, By the way, this happened. That
17 kind of a change.

18 THE COURT: Okay. So when you turn Location
19 History off, nothing is collected even to target ads;
20 is that right?

21 THE WITNESS: Any ads measurement powered by
22 Location History is -- there's no new data for that
23 account available because we've stopped collection.

24 THE COURT: Okay. And so if you turn
25 Location History off, it also goes off in, like, Web &

McGRIFF - DIRECT

367

1 App Activity? Does it go off all the way?

2 THE WITNESS: So, there's location services
3 for the device completely unaffected by a user's
4 decision with Location History. Location History is
5 the only store of precise device location.

6 What Web & App Activity is storing now is
7 only course and location. So if I attempt some
8 activity or a service with Google, and I have opted in
9 to Web & App Activity, they would know that I
10 attempted that activity in Richmond. And the team is
11 looking -- they coarsen the location because they
12 don't need to know that I was in this building in this
13 room for their general purposes. They just need to
14 know that I'm in Richmond.

15 So Web & App Activity would have some record
16 of, if I opted in, I did or performed some task in
17 Richmond. If Location History -- if it was on for the
18 account, would have more granular information. That I
19 was in this building, would be the likely inference.
20 It would understand that I walked to this building.
21 All the details that are visible in Timeline.

22 If I turned Location History off, Web & App
23 Activity would still know, if I opted in, that I was
24 in Richmond. So when you mentioned ads, Location
25 History does not power all ads. A lot of the -- any

McGRIFF - DIRECT

368

1 geotargeting or other use of Location for ads is
2 coming from the location services at the device level.

3 The specific type of advertising powered by
4 Location History, the store visits that were
5 mentioned, is only possible for users who have opted
6 in to Location History. And so if they turned
7 Location History off, then there's no new information
8 coming in for the account.

9 THE COURT: All right. So Location Services,
10 can you turn that off, too?

11 THE WITNESS: Yes. Location Services is the
12 location master for your device. You can just say
13 turn off -- no app or service on my device can have
14 access to my location.

15 THE COURT: So if you have Location Services
16 and Location History turned off, is Google retaining
17 any data? I mean, in its collection for --

18 THE WITNESS: We don't have access to any
19 information. And Location Services at the device
20 level supercedes anything else. So if you turned
21 Location Services off, and you have Location History
22 on, Location History is not collecting any information
23 because we don't have access to it.

24 Location, both IOS and Android, position
25 location master, if you will, as an ultimate control

McGRIFF - DIRECT

369

1 to say I want this device to have any location
2 awareness or access at all. And then once that's
3 enabled, you get the different options for each IOS.
4 Sorry. Operating system.

5 THE COURT: So if they're both off, nothing's
6 going in in an anonymized fashion to Sensorvault? I
7 know I'm using, you know, human terms, not Google
8 terms. Not that Google is inhuman. But I do like the
9 Monday morning meetings, by the way. I just have to
10 put that on the record. That's just fabulous.

11 Okay. So if they're both off, then Google
12 isn't doing this extra service for its customers from
13 your perspective, collecting information from
14 somebody's privacy perspective; correct?

15 THE WITNESS: That's correct. And also, just
16 to be clear, there's no anonymous collection in
17 Location History. I just want to make that clear.

18 THE COURT: So none of that goes to the
19 Sensorvault?

20 THE WITNESS: If Location History is on for
21 your account, everything that's collected is
22 associated with you as a user to that account. And
23 that is to, in part, help us with the full data
24 management of anything collected for you. When you go
25 to Timeline and you view all of your data in Location

McGRIFF - DIRECT

370

1 History, all of those points are associated with you.
2 If you choose to delete a specific point, date, range,
3 specific visit, we are able to give those controls,
4 because all of that information is associated with you
5 as a user.

6 What's available in Timeline is a full
7 distillation of everything that has been collected for
8 your account in the context of Location History.

9 THE COURT: Okay. But there's no process
10 where it gets put into a greater data set?

11 THE WITNESS: We do use an aggregate. An
12 example would be our COVID mobility reports where we
13 take all of the user's data for a specific area. We
14 aggregate it. We anonymized it. And then we perturb
15 it further by, essentially, adding noise to create a
16 representative model of the aggregate. And we do that
17 to ensure that when we release the mobility reports,
18 saying this was the -- these were the mobility trends
19 in Richmond when the COVID restrictions were
20 implemented versus seven days later, those models are
21 actually not any of our data, even in aggregate. It's
22 a representative model of the trends. And those are
23 what we published in the context of the mobility
24 reports.

25 This is very similar to what we do with

McGRIFF - DIRECT

371

1 busyness on Maps. I don't know if you're familiar
2 with the feature. On Maps, if it's a popular place,
3 we'll show you whether or not that place is usually
4 busy at that time.

5 THE COURT: Oh.

6 THE WITNESS: But those busyness bars are --
7 I could delete all of my data. It's not going to
8 change that bar, because the bars there are actually
9 an aggregate. They're not -- it's not even a literal
10 aggregate. It's kind of a sufficiently transformed
11 model that is sufficient for the decision making
12 you're doing when you're looking at Maps. Is it busy
13 or is it not?

14 THE COURT: Okay. So that's a separate model
15 that happens outside the Sensorvault or --

16 THE WITNESS: Those models are built off of
17 the data that is within Sensorvault and aggregated.
18 Those are so sufficiently transformed that they no
19 longer resemble user data.

20 THE COURT: All right. Okay. Now, I'm going
21 to ask a question because this is just lore. If you
22 have geofence or Location History, it's not just doing
23 the ground, right? It's going up? Like it does 3D?
24 So this is my question: If you're doing a search,
25 could you know whether you were on the fifth floor

McGRIFF - DIRECT

372

1 here or the third floor if you were there for a
2 sufficient period of time?

3 THE WITNESS: Is that information sometimes
4 available in terms of where we understand a device's
5 positioning to be within a building? Yes. I can't
6 speak to how, if at all, that factors into the warrant
7 process. I would be shocked if they're at the point
8 of being so specific to lore as opposed to area.

9 THE COURT: So, I can tell you I don't know
10 where I hear these things. I've heard that you could
11 tell whether somebody is in one apartment or another
12 through a geofence.

13 THE WITNESS: Oh. I can't speak to the
14 warrant process. I can say that data itself, it is
15 possible with -- it is possible at just a raw data
16 level to make some estimation of where a user is --
17 where a device is in terms of elevation, yes. I don't
18 know how that translates to the --

19 THE COURT: Right. Well, I would think if
20 you have home Wi-Fi or something, right?

21 THE WITNESS: There are -- I mean, we've
22 looked at it from several different angles over the
23 years, both in terms of emergency response, someone
24 has a distress, and how we can communicate or how it
25 can be relayed this person is on a specific floor.

McGRIFF - DIRECT

373

1 Again, all of this comes back to location inference.
2 There are a lot of signals that are available, but
3 they're not always available. So a user may have
4 Wi-Fi enabled; they may not. And so we look at all of
5 those signals and try to infer, to our best
6 estimation, where you are.

7 This is also true in the context of Maps when
8 you're in a mall. We will do our best to determine
9 whether you are on the second floor of the mall or the
10 first floor of the mall if we have launched our
11 directory to help you navigate indoors. But that's a
12 very nascent area. It's a best guess.

13 So from my understanding of the warrant
14 process, it's not that granular, and I would kind of
15 be puzzled if they asked us for that, only because we
16 would just say okay. We wouldn't be able to guarantee
17 it in any way.

18 THE COURT: Right. What it says is it's a
19 meter -- I can't remember the range. Anyhow, I've
20 asked my questions. So you all can follow up on that
21 or not.

22 I appreciate your putting up with my
23 layperson's terms.

24

25

McGRIFF - CROSS

374

1 CROSS-EXAMINATION

2 BY MR. SIMON:

3 Q Good morning, Mr. McGriff. I'm just going to
4 clarify a number of things with you because I think it
5 would be helpful for all involved.

6 What is your day-to-day job at Google?

7 A I am a Product Manager in Geo.

8 Q Okay. So, in that role, what do you do on sort of
9 a day-to-day basis?

10 A I look at all of the products and features that
11 I'm responsible for, both what is currently in
12 production, what we are currently implementing to be
13 released into production soon, and then also what we
14 might be working on in the future.

15 Q And so those products that you have some ownership
16 over, are those, to some extent, quite involved with
17 Location History or how do you determine which
18 products you might have some ownership over?

19 A It steadily evolves over time. I do have
20 responsibility for Location History overall as a
21 product. As the defense blog posts reference, I also
22 looked at several broader features for Maps, including
23 Maps incognito mode, other general location aware
24 features and functionality. But, again, that is
25 steadily evolving over time.

McGRIFF - CROSS

375

1 Q Okay. And in this case, I know you were brought
2 in, in part, because of some discussion about Location
3 History; right?

4 A That is correct, yes.

5 Q And you submitted -- we've got a smaller binder
6 that's there and that will be used primarily here. It
7 might go to some defense exhibits. But in that
8 binder, there are a number of exhibits. One's marked
9 Government's Exhibit 3. You can take a look. And
10 we've got Government's Exhibit 3B and Government's
11 Exhibit 3C. Those would be the first declaration,
12 supplemental, and the third.

13 Are those the declarations that you submitted in
14 this case?

15 A 3, B, and C, that is correct, yes.

16 MR. SIMON: Okay. And, Judge, I'd move to
17 admit those as Government's Exhibits 3, 3B and 3C.
18 They've been admitted as defense exhibits, but --

19 THE COURT: Right. There's no objection,
20 right?

21 MS. KOENIG: Right.

22 THE COURT: They'll be admitted.

23 (Government's Exhibit Nos. 3, 3B, and 3C are
24 admitted into evidence.)

25 BY MR. SIMON:

McGRIFF - CROSS

376

1 Q Now, am I to understand that, as you testify here
2 today, you stand by those declarations; right?

3 A That is correct, yes.

4 Q And so your testimony before this Court is merely
5 to clarify through the questions that we ask you;
6 right?

7 A That is correct, yes.

8 Q Now, you were asked on direct a number of
9 questions about search warrants, about the geofence.
10 Let's just be clear about it. Your job is not to
11 respond to geofence warrants, is it?

12 A Thankfully not, no.

13 Q In fact, you literally -- when Detective Hylton
14 testifies that he served a search warrant on Google
15 for this geofence in this case, you weren't involved
16 in that at all; right.

17 A No.

18 Q And you typically don't get involved unless there
19 is some specific sort of technical question about
20 Location History; right?

21 A That is correct, yes.

22 Q Okay. Now, because there have been so many
23 questions asked to you about the search warrant,
24 despite it not being your job, I do want to ask you,
25 is it your understanding that a Google geofence

McGRIFF - CROSS

377

1 warrant simply calls on Google to provide, based on
2 probable cause determined by a magistrate, a
3 magistrate judge, maybe an Article III judge, to
4 provide only those devices that have coordinates that
5 fall within a certain geofence if Google so determines
6 that they do?

7 A That is my understanding, that's correct.

8 Q So the warrant never calls on Google to provide
9 anything outside of the geofence warrant; is that
10 correct?

11 A That is correct, yes.

12 Q Not this case in particular.

13 A That is my understanding, yes.

14 Q Now, there have been some questions about Location
15 History information, what happened in this case. If
16 the government's warrant asked you to give us those
17 location coordinates, that would be responsive; right?

18 A Yes.

19 Q And because Google wants to comply with the
20 warrant as is, it only provides Location History
21 information; right?

22 A Yes.

23 Q So in looking at your affidavit -- I'll get the
24 right one up. It's paragraph 16 and 17. It looks
25 like it's 96-1. That's going to be your first

McGRIFF - CROSS

378

1 declaration. I'll let you look at those paragraphs,
2 16 and 17.

3 THE COURT: This is Government's Exhibit 3?

4 MR. SIMON: Correct, Judge. My apologies.

5 A Okay.

6 Q Now, can you explain -- and also maybe take a look
7 at 21 and 22. Can you explain why -- and they're
8 explained in more detail in 16 and 17 and 21 and 22 of
9 your first declaration, but why don't we have anything
10 other than Location History information returned in
11 this warrant?

12 A As mentioned, Location History is the precise
13 device storage where you get granular information.
14 WAA would understand, if location was captured in WAA
15 with associated activity, only at a very granular
16 level that you were in Richmond. Or it would depend
17 on if you went to very -- I have family in Halifax,
18 Virginia. There's nothing in Halifax, Virginia. If I
19 go there, I will probably be coursened at a WAA level
20 to being in greater Danville.

21 THE COURT: WAA is Web & App Activity?

22 THE WITNESS: Yes, Web & App Activity.

23 A There are not enough people there. So it's just
24 coursened to a level where they can guarantee a
25 certain amount of privacy.

McGRIFF - CROSS

379

1 So these other stores would not have the
2 information that Location History has in terms of the
3 level of detail.

4 Q Okay. And that's the same with Google Location
5 Accuracy?

6 A Google Location Accuracy moves even farther in the
7 opposite direction. That collection from the time of
8 collection is anonymized. So it's not associated with
9 a specific user.

10 Q Okay. And so the bottom line, the reality of why
11 Google returned Location History information in this
12 case is because it's the only thing responsive to a
13 warrant for coordinates that are within a certain
14 radius at a certain time; right?

15 A That is my understanding, yes.

16 Q Now, talking about Google location information,
17 we'll get into sort of the business and how Google
18 does its business with location. But the 68 percent
19 confidence interval, when we talk about that, to be
20 clear, we're not talking about that broader 150-meter
21 geofence that we draw; right? That's not where the
22 68 percent is sort of focused on; right?

23 A Yes.

24 Q So it's actually focused on what we're looking at
25 as sort of the display radius; right?

McGRIFF - CROSS

380

1 A That's correct, yes.

2 Q So when we talk about 68 percent, we're talking
3 about 68 percent within the blue radius?

4 A That is correct, yes.

5 Q Not the geofence that we draw saying only give us
6 devices within this area; right?

7 A Yes.

8 Q Okay. If you want to clarify, go ahead.

9 A No, no. Yes. Your questions made me realize
10 earlier questions. The answer is yes.

11 Q Okay. If we talk about certain points in the data
12 set that we have here, there will be Defense Exhibit
13 3, I think it is, that's under seal, has a number of
14 different data points for the anonymized reference ID
15 numbers we got at the first phase here, within that
16 geofence radius. And there will be points that will
17 say a Wi-Fi point will be 84 meters. And then within
18 30 seconds, there's a 387-meter display radius. And
19 that's a Wi-Fi point. Could you explain why that
20 might be?

21 A All of these readings are from device sensors.
22 There could be any number of reasons why the device
23 sensors connect to different signals or record
24 different signals. I can't offer any specific answers
25 for this case, but it is possible that you get

McGRIFF - CROSS

381

1 different readings at different times.

2 Q Okay. As it relates to the accuracy of Google's
3 location information, you would agree that this isn't
4 a shot in the dark for Google, that Google maintains
5 relatively good location information; right?

6 A It is not a random number generator, no.

7 Q And it's -- I guess to get to maybe a clearer
8 point, it is a technologically advanced assessment of
9 whether somebody is within a certain place at a
10 certain time; right?

11 A It is a good-faith attempt to make an informed
12 decision, yes.

13 Q And so in one particular sort of point, I guess,
14 in that -- sort of that space, is that Google has made
15 the point that Location History information might even
16 be a little bit better or much better than cell-site
17 location information; right?

18 A That is likely true, yes.

19 Q So to the extent that we're talking about the
20 folks being within that blue -- in the blue radius,
21 not the broader geofence, Google's got good
22 information on those devices; right?

23 A Yes.

24 Q Now, are Google's privacy policies online?

25 A Yes, they are.

McGRIFF - CROSS

382

1 Q They're publicly accessible, then; right? And so
2 are the terms of service, presumably?

3 A Yes.

4 Q And if we were to go on Google today, as defense
5 counsel showed you, we'd find everything Google's ever
6 said about terms of services and privacy policies;
7 right?

8 A Apparently, yes.

9 Q And when Google users set up Google accounts, it's
10 my understanding that they would be agreeing to
11 Google's terms of service -- right? -- in the process?

12 A Yes.

13 Q And would they also be agreeing to Google's
14 privacy policy?

15 A I believe so, yes.

16 Q Now, if I show you -- I think you've looked at it
17 already because it's admitted -- Defense Exhibit --
18 Defense Exhibit 43A, the redlined privacy policy. I'm
19 not going to spend a ton of time on this.

20 THE COURT: It'd appreciate it going up on
21 the screen.

22 MS. KOENIG: Sure.

23 BY MR. SIMON:

24 Q When we look at this privacy policy --

25 MR. SIMON: And, Judge, I'm looking at the

McGRIFF - CROSS

383

1 first page. It's marked May 25 on the bottom left.

2 Q When we read the paragraph that starts "Our
3 privacy explains," what's cut out that it explains?

4 A I'm sorry. Can you repeat that?

5 Q What is cut out there? What is sort of marked
6 out, as defense counsel's sort of insinuating that it
7 was taken out of the policy? But what is marked out
8 there?

9 A Well, there was copy that was there that was
10 refined in some way. So that was replaced with the
11 copy below.

12 Q Okay. And so in many ways, what's happening is
13 Google is sort of maybe moving things around as
14 opposed to totally deleting them or inserting them?

15 A What's happening here is, again, as I mentioned
16 yesterday, with any product, you are always making
17 improvements. There are always refinements. There
18 are new technologies, new capabilities, new sensors,
19 new understandings. So these are living documents
20 that will always evolve to reflect the current
21 context. All of the inputs of feedback, both from
22 critics and friends, users, all of that is informing
23 in how you continually improve.

24 So the crossed-out portions are the way they stood
25 at some previous point. The replaced copy is a -- at

McGRIFF - CROSS

384

1 the time a good-faith attempt at better presenting the
2 previous copy.

3 Q Okay. And if you look with me at page 3, I'll end
4 it here, page 3 and 4, but starting with "Information
5 we collect," we collect from your use of our services.
6 Do you see that?

7 A Yes.

8 Q And it then begins to provide a list of services
9 that were in that December 18 policy; right?

10 A Yes.

11 Q December 18, 2017 policy. If you go to the next
12 page, page 4, are you there with me?

13 A Yes.

14 Q Is "location information" on that page?

15 A Yes, it is.

16 Q So that would mean that location information was
17 set forth -- that you all collected location
18 information December 28th of 2017; right?

19 A Yes.

20 Q Okay. Now, in both of these privacy policies,
21 would it be fair to say that Google provides folks
22 with some reasons that third parties might get
23 information on them?

24 A I believe that is explicitly mentioned, yes.

25 Q And one of those reasons is a legal reason; right?

McGRIFF - CROSS

385

1 That government might come with a search warrant with
2 probable cause; right?

3 A The government is crafty, yes.

4 MR. SIMON: Judge, I think at this point I'd
5 move to admit -- the witness has testified that the
6 privacy policy and terms of services are available
7 online. We pulled in Government's Exhibit 5 and 5A --
8 I don't think the defense will object to this -- but
9 move in the privacy policy effective January 22, 2019,
10 that's Government's Exhibit 5 and 5A, the terms of
11 service modified as of October 25, 2017. We'd move to
12 admit those.

13 MS. KOENIG: Judge, I don't believe he's
14 presented those exhibits to Mr. McGriff to identify or
15 even recognize. So I think that's the first problem.
16 And the second, I think, is we have to establish
17 relevancy of those. There may be a relevant reason,
18 but those were certainly something that existed
19 afterwards.

20 MR. SIMON: Judge, we've -- the privacy
21 policy as of January 22 --

22 MS. KOENIG: I'm sorry. I missed the date.
23 But I think you still need to show him the exhibit.

24 MR. SIMON: Sure.

25 BY MR. SIMON:

McGRIFF - CROSS

386

1 Q Can you take a look at Government's Exhibits 5 and
2 5A? Government's Exhibit 5 is long. So I'll let you
3 flip through it.

4 A Exhibit 5 is the privacy policy as of January 22,
5 2019, and Exhibit 5A is the terms of service as of
6 October 25, 2017.

7 MR. PRICE: Judge, we'd now move to admit
8 Government's Exhibit 5 and 5A.

9 MS. KOENIG: No objection at this point, Your
10 Honor.

11 THE COURT: All right. They are entered.

12 (Government's Exhibit Nos. 5 and 5A are
13 admitted into evidence.)

14 BY MR. SIMON:

15 Q Mr. McGriff, just to be clear, I know we've asked
16 you about these privacy policies, but the best
17 evidence of Google's privacy policy in terms of
18 service are going to be from the online sources;
19 right?

20 A That's correct.

21 Q In this case, the search warrant called for those
22 location coordinates within the radius, and you've
23 noted that only Location History information was
24 responsive to the warrant; right?

25 A That's correct, yes.

McGRIFF - CROSS

387

1 Q And that means that if the defendant's account
2 didn't have Location History enabled, we'd get
3 nothing; right?

4 A That is correct, yes.

5 Q And I just want to sort of be emphatic about that.
6 It is not that he turned on Location on his device;
7 right?

8 A That is correct.

9 Q And so when I say that, it's not that I get a
10 phone, and I say I want to use where I am at this
11 moment; right?

12 A That is correct, yes.

13 Q And neither is it if I turn on Google Maps, and I
14 want realtime location services, I don't want to just
15 put in one address and go to another, just doing that
16 doesn't enable Location History, does it?

17 A No, that is correct.

18 Q And so when we talk about Location History, we're
19 talking about that setting that you have said
20 two-thirds of your customers have found the ability to
21 not enable; right?

22 A That is correct, yes.

23 Q Okay. And that's in your declaration that
24 approximately one-third have turned it on; right?

25 A Yes.

McGRIFF - CROSS

388

1 Q But even after it's turned on, even after it's
2 turned on, you can delete it?

3 A Yes.

4 Q You mention on direct, you said we use the word
5 "pause"; right?

6 A Yes.

7 Q Not for deletion, but for turning it off?

8 A That is correct.

9 Q And so when it's paused, it is off?

10 A It is functionally off, yes.

11 Q Let's be clear about it. When it's paused, there
12 is no record that would be responsive going forward
13 from Google on the defendant's account; right?

14 A That is correct.

15 Q So if I had Location History enabled in this case,
16 the robbery, I think, took place May 20, 2019, if I
17 paused that on May 19, 2019, and I still had location
18 on on my device, and I traveled with it the next day,
19 Location History wouldn't know where I traveled on
20 May 20 that next day; right?

21 A That's correct.

22 Q And by the same token, the government could come
23 to you with a warrant five times -- as many times as
24 we wanted. We wouldn't get information on May 20,
25 2019; right?

McGRIFF - CROSS

389

1 A That is correct.

2 Q All right. When we talk about the deletion, you
3 mentioned near immediate deletion; right?

4 A That is correct, yes.

5 Q Can you clarify what that means? If I deleted --
6 and maybe -- if you can. If I deleted my Location
7 History information at 5 p.m. Eastern, would Google
8 turn the information over to the government if they
9 served the warrant the next morning?

10 A By design, we will return in response to these
11 warrants whatever we have. The deletion process
12 begins immediately. There is some point in that
13 process where the data is not retrievable for this
14 purpose. And the reason it's hard to put an exact
15 point in time on that is we have servers. The data is
16 stored on tapes and servers. It will take time to
17 propagate through the full system before data is
18 deleted from tapes. But I am also certain that we are
19 not getting to the point of retrieving tapes from data
20 centers to respond to the warrant.

21 So there is some point in that flow where
22 eventually it's no longer accessible by the tools
23 because it's too far along in the deletion
24 propagation. I just -- I don't have a way of putting
25 an exact time on when that happens.

McGRIFF - CROSS

390

1 Q So in this case, we -- the robbery happened on
2 May 20, 2019. We came to Google on June 14 of that
3 same year. If the defendant had deleted his Location
4 History information, it wouldn't have been available
5 by that point; right?

6 A If it was deleted the day after, I don't see how
7 it would be possible for it to still be available, no.

8 Q But as a general matter, the near immediate
9 deletion, you're saying that happens in realtime?

10 A The request is initiated right away. Again, it
11 just takes time to propagate down to tapes.

12 Q Okay. When we've talked -- and pausing means it's
13 obviously turned off. Deletion means it's deleted.
14 And when it's paused, it's paused?

15 A Yes.

16 Q I wanted to go through with you the opt-in to
17 Location History process that you've described in
18 multiple of your declarations, both the first and the
19 third, which will be 3 and 3C, if you want to
20 reference them as we go through it.

21 Google has server side protections -- correct? --
22 in terms of what information goes into the so-called
23 Sensorvault?

24 A Yes.

25 Q So if a user doesn't follow that consent flow,

McGRIFF - CROSS

391

1 Google rejects collecting the Location History
2 information; right?

3 A I would flip it and say that collection is not
4 initiated unless there's been a valid consent, yes.

5 Q And the defense has shown you a number of -- a
6 number of screenshots. And I'll get to those with
7 you. But the opt-in on this device, I know you don't
8 have the specific user interface, but we have Location
9 History information on this phone. It had to follow a
10 verified consent flow that Google had at that time;
11 right?

12 A Yes.

13 Q And that consent flow, as you noted, a verified
14 consent flow would be the same across all applications
15 and devices?

16 A It's the same consent that was acknowledged in
17 some context, yes.

18 Q When we talk about the consent flow that you were
19 talking about on direct for Google Assistant and the
20 consent flow generally, there is always a process by
21 which you would have to see what you're consenting to
22 on the page; right?

23 A There is some reference to -- yes. Yes.

24 Q And you'd have to scroll down to get to the
25 buttons in question?

McGRIFF - CROSS

392

1 THE COURT: The what question?

2 MR. SIMON: I'm sorry. The buttons.

3 THE COURT: So, I think, especially at the
4 end of your sentences, which usually include your key
5 aspect of the question, I'm having trouble hearing it.

6 MR. SIMON: Okay. Apologies, Judge.

7 THE COURT: That's fine.

8 BY MR. SIMON:

9 Q You'd have to go down to the "Turn on" or "No,
10 thanks" buttons before you consented to, in this case,
11 Location History; right?

12 A In that specific flow, yes.

13 Q Now, in your supplemental declaration, and I think
14 you stated on the record that you stand by these
15 declarations, you noted that the defense expert was
16 wrong when he said all you had to do to have
17 successfully enabled Location History information was
18 click "Yes, I'm in" on Google Maps; right?

19 A Yes.

20 Q At the same time, the screen that the person would
21 be seeing on Google Maps does say that Google
22 periodically stores your location; right?

23 A Yes.

24 THE COURT: So, are you moving into evidence
25 3B?

McGRIFF - CROSS

393

1 MR. SIMON: Judge, I think we've already
2 moved in 3B. I moved them all in together, 3A, 3B,
3 and 3C.

4 THE COURT: Oh, I thought you just did 3A and
5 3C.

6 MR. SIMON: No. If I did, I do want to move
7 in 3B.

8 THE COURT: There's no objection, right?

9 MS. KOENIG: That's right.

10 THE COURT: It's in.

11 BY MR. SIMON:

12 Q Now, with respect to the Google Assistant opt-in,
13 did you have a chance to previously watch videos that
14 the defense counsel have provided in preparation for
15 this hearing?

16 A If I remember correctly, I saw two videos, yes.

17 Q Did you happen to see possibly a "Got To Be
18 Mobile" video?

19 A I believe so, yes.

20 Q I'm going to show you what was formerly marked as
21 Defense Exhibit 8.

22 MR. SIMON: But I've marked it, Judge, for
23 this hearing, Government's Exhibit 12. It's a video,
24 Judge, that I just think will play for about 15
25 seconds, and then skip to a certain point in the

McGRIFF - CROSS

394

1 video.

2 THE COURT: All right. Is there any
3 objection to the use of this exhibit?

4 MS. KOENIG: I don't know what the --

5 MR. SIMON: This is the "Got To Be Mobile"
6 video that you provided to us in preparation for the
7 November hearing that was no longer on the list for
8 this hearing.

9 But we can play it, Judge.

10 MS. KOENIG: I think we need to have a couple
11 of questions that are laid. So we had that on our
12 exhibit list. I'll tell the Court that we don't know
13 when that video was made. So if we can lay a
14 foundation about when that was created, that will be
15 helpful.

16 MR. SIMON: Judge, ample hearsay has been
17 admitted in this hearing, one. I think it's a YouTube
18 video. We can do that through our expert later
19 subject to connection on the date on that. That has a
20 date to it that defense counsel provided to us again.
21 This is how we have the video and that the witness has
22 said he's watched. I'd like to have him watch the
23 video and say he's watched it. And to the extent that
24 --

25 THE COURT: Was it played in the earlier

McGRIFF - CROSS

395

1 hearing?

2 MS. KOENIG: It wasn't. Your Honor, this
3 video is a video that we had identified as a potential
4 exhibit for the November of 2020 hearing that we had
5 to continue.

6 All I'm saying, there is a date that is
7 associated with the video, but that is the video
8 creation date, not when the -- that is the video
9 posting date, not when the video was created,
10 necessarily.

11 THE COURT: All right. Well, I will admit it
12 subject to those objections.

13 You know, we're establishing a full record
14 here.

15 MS. KOENIG: Sure. And I appreciate that.

16 The other thing I'll just note for the Court
17 is that the video skips. I indicate to the Court that
18 we had anticipated potentially introducing this. We
19 just noticed some flaws with this, and I just wanted
20 to bring them to the Court's attention before we watch
21 it.

22 THE COURT: Okay. Well, that's different
23 than objecting to its entry. Okay. It's entered.

24 (Government's Exhibit No. 12 is admitted into
25 evidence.)

McGRIFF - CROSS

396

1 MR. SIMON: Thank you, Judge. We'll play it.

2 (Video is played.)

3 BY MR. SIMON:

4 Q Mr. McGriff, in this video, is this what we're
5 talking about when we talk about Location History
6 information?

7 A No.

8 Q Okay. This is just sort of what you would agree
9 to if you wanted Google Maps to have realtime
10 information?

11 A Any app, yes.

12 Q Any app. Okay.

13 (Video is played.)

14 Q Is this where if you were going to enable Location
15 History on this phone, a Samsung Galaxy S9, at setup,
16 is this a possible consent flow screen you'd see on
17 Location History?

18 A This is a possible flow, yes.

19 Q Okay. Is Location History on the screen by
20 itself?

21 A It is. As I mentioned previously, the user would
22 be presented with whatever consents were not already
23 agreed to that were required or suggested required in
24 this context. So the only one that was prompted here
25 is Location History, yes.

McGRIFF - CROSS

397

1 Q And to get past this page, you'd have to choose --
2 what are the options there?

3 A Two options, "No, thanks" or "Yes, I'm in."

4 Q Okay. And, again, the line down at the bottom
5 reminds the user. It appears that they can go to
6 account -- myaccount.google.com; is that right?

7 A That's correct, yes.

8 Q To change those settings?

9 A Yes.

10 MR. SIMON: Judge, no further questions on
11 Government's Exhibit 12 at this point.

12 THE COURT: All right.

13 BY MR. SIMON:

14 Q Well, just to reiterate. This is a possible
15 consent flow, as well -- right? -- that the defendant
16 might have encountered in July of 2018?

17 A That's possible. The screen immediately before is
18 saying, hey, there's Assistant. Do you want this?
19 And this following screen, "Yes."

20 Q Where Location History stands alone?

21 A That's correct, yes.

22 Q Do you have any reason to believe that that's not
23 a Samsung Galaxy S9 Plus?

24 A I am not an expert on Samsung devices.

25 Q Understood.

McGRIFF - CROSS

398

1 Now, I want to talk about the reality of Google
2 Assistant and sort of the value that it has, to some
3 extent.

4 THE COURT: The value it has to what?

5 MR. SIMON: To some extent.

6 THE COURT: Okay.

7 BY MR. SIMON:

8 Q The Google Assistant -- in opting in through
9 Google Assistant doesn't change that to have Location
10 History information. You first, at least, have to
11 turn location settings on a device on; right?

12 A That's correct.

13 Q And that's just if I have my phone, again, I need
14 to tell my phone you can get my location. So it
15 wouldn't change that?

16 A Correct.

17 Q It doesn't change that I would have to get to a
18 screen like we've just seen in Government's Exhibit
19 12, or as defense has posited, where you've got a few
20 more options. You'd have to say either, "Yes, I'm in"
21 or "Turn on" or "No, thanks"?

22 A That's correct.

23 Q And at the same time you'd also have to make sure
24 that location reporting is on just beyond the device;
25 right? It's, like, the app level setting?

McGRIFF - CROSS

399

1 A Location reporting -- the control that is a
2 subsetting of Location History is enabled on the
3 device that you opted in on if it is a mobile device
4 that can be used for Location History. We don't
5 support all form factors. So, for example, you can't
6 opt in to Location History through a TV. But if you
7 were signed into any other devices, it would not
8 enable location reporting on those devices remotely,
9 no.

10 Q Just to be clear about your testimony on direct,
11 you don't believe that pressing "No, thanks" that's
12 set forth in Defense Exhibit 7, pages 3 and 4, that
13 that would mean you can't use Google Assistant; right?

14 A That's not my understanding, no.

15 Q There was some discussion of -- and, obviously,
16 you'd have to turn on the device. And there's the
17 point about signing in to your Google account. So you
18 still -- if I have a phone, and I have Location
19 History enabled, you could actually just sign out of
20 the Google account altogether on a phone; right?

21 A That's correct.

22 THE COURT: Wait, wait, wait. What do you
23 mean by that? Sign out --

24 BY MR. SIMON:

25 Q So, you can help me explain it. There are -- when

McGRIFF - CROSS

400

1 I have a phone, and I set up a phone, if I tie a
2 Google account to the phone, then the phone has my
3 Google account connected to it; right?

4 A Yes.

5 Q And I would have to be signed in to that Google
6 account for Location History information to be
7 accessible; right?

8 A Yes. You can add a Google account -- multiple
9 Google accounts to a device. Just as easily as you
10 can add them, you can remove them. So you can sign in
11 and out of accounts on a device, yes.

12 Q And those application level options, talking about
13 in your declaration, particularly the third one, I
14 think it's from paragraph 25, where you talk about you
15 could say allow an application to use my location
16 sometimes, deny it, allow it only while I'm -- or
17 allow it all the time. Those options are available on
18 both Android and iPhone?

19 A Yes, those are the operating system, OS, level
20 controls for app access to location.

21 Q Okay. And there's a lot of sort of discussion
22 about privacy concerns of Google users. You'd agree
23 that there's a sort of varying level of interest in
24 privacy by different users; right?

25 A There are varying degrees of privacy

McGRIFF - CROSS

401

1 considerations, yes.

2 Q So there is some discussion that some people are,
3 like, convenience seekers. I've seen that phrase
4 used.

5 A Yes.

6 Q And so by that, I don't mind what Google is asking
7 for -- right? -- because what I'm interested in is
8 going from point A to point B, and I want realtime
9 traffic directions; right?

10 A That is possible, yes.

11 Q With respect to the two-thirds of folks who have
12 not enabled Location History, your testimony on that
13 one-third piece is that that has been consistent
14 across the time that Location History has been enabled
15 or has been a product; right?

16 A For the life of the product, yes.

17 Q How long has it been a product of Google's?

18 A Many years now.

19 THE COURT: How many?

20 THE WITNESS: Many years now. I believe it
21 was made a product in 2015 or 2016.

22 BY MR. SIMON:

23 Q So over the course of those -- in this case, by
24 the time you have 2019 -- four years, the number has
25 been roughly the same, a-third of users have enabled

McGRIFF - CROSS

402

1 it?

2 A That's correct.

3 Q Two-thirds have decided not to collect Location
4 History information?

5 A That's correct.

6 Q And, again, the only reason that you had anything
7 to give us under geofence warrant is because Location
8 History was enabled on the defendant's account?

9 A That is correct, yes.

10 Q There was some questions on direct about the
11 search that Google does to give us the responsive
12 information. You don't posit -- right? --that you
13 gave us anything other than 19 devices in this case?

14 A I have no visibility into the processing and
15 servicing of these warrants.

16 Q Right. So I'm making a mistake there, too, in
17 asking warrant-related questions. But to the extent
18 that Google responds to the warrant, it is always
19 going to be for only the devices that were within a
20 radius at a certain period of time; right?

21 A That is correct.

22 Q And is there a possible way in which -- we've
23 talked about sort of the indexing possibly, the grid
24 and location coordinates. Isn't there a way that
25 Google could possibly keep folks who are in Richmond

McGRIFF - CROSS

403

1 on a certain side of town -- I'm going to use the
2 right words here -- sort of separate them out in terms
3 of their location coordinates just based off of where
4 they are at a certain period of time?

5 A Is the question is it possible to refine the scope
6 of the request?

7 Q To refine the scope -- the manner in which Google
8 goes about getting information inside of its own
9 servers.

10 A Objectively, yes. This process could be refined
11 and crafted in a number of ways, yes.

12 Q On the Google side; right?

13 A On all sides, yes.

14 Q When we talk about -- but the warrant in this
15 case, specifically, you agree, just asks for folks who
16 Google determines is within a certain radius at a
17 certain period of time; right?

18 A That's correct.

19 Q So it would only be our interest in this case, and
20 the government's interest in other cases, to know
21 which devices were at the site of an alleged crime;
22 right?

23 A That is my understanding, yes.

24 Q And the manner in which Google undertakes this
25 search, that is not directed by the government; right?

McGRIFF - CROSS

404

1 A No.

2 Q And when I use "search" -- not to cut you off.

3 When I use "search," I'm not using that in the context
4 of sort of the Fourth Amendment. And when you say
5 "searching the database," you're not talking about the
6 issues at hand here; right?

7 Let me ask it another way: You're not a lawyer;
8 correct?

9 A Far from it.

10 Q And I'll just leave it there.

11 The discussion of anonymized devices and
12 deidentified is a phrase that Google uses; right? The
13 release of data by Google responsive to the request,
14 particularly just focusing on the first stage here,
15 give us the devices within a certain period of time at
16 the site of an alleged crime. That does not give us
17 the name of the individual involved; right?

18 A That's correct.

19 Q It does not give us a phone number of the person
20 involved; right?

21 A That is correct.

22 Q It doesn't tell us anything other than the
23 location coordinates that are responsive to them being
24 at the site of an alleged crime at the time alleged in
25 the warrant; correct?

McGRIFF - CROSS

405

1 A That is correct, yes.

2 Q The discussions of Google's business model,
3 location information matters to Google's bottom line
4 in terms of money; right?

5 A I cannot speak to the impact on our bottom line
6 overall as a company.

7 Q I guess to use a phrase, location information that
8 users provide you can be used as a commodity within
9 the business?

10 A I would say -- I would generalize that slightly to
11 say that location awareness is a core component of
12 computing broadly in all contexts at this point in
13 time.

14 Q Okay. Computing broadly --

15 A Just there are very few products and services
16 beyond Google that don't rely on some location
17 awareness, whether it be to understand whether or not
18 you can view content in a specific area. I mean,
19 there are broad uses of location information generally
20 in terms of just how information technology works
21 today.

22 Q Okay. In looking at some of sort of the uses that
23 when Google is providing goods and services to its
24 customers and doing so in an effective way, that's a
25 part of Google's business model; right?

McGRIFF - CROSS

406

1 A Our goal is to be effective, yes.

2 Q And I ask that sort of basic question because when
3 we look at --

4 MR. SIMON: Can we pull up the first
5 affidavit of Mr. McGriff. This is Exhibit 3.

6 BY MR. SIMON:

7 Q In paragraph 5, you sort of note that the use of
8 this information sort of allows a user to store and
9 record their movements and travels; right?

10 A That's correct, yes.

11 Q And you sort of used that -- this information is
12 used to do, among other things, sort of make -- sort
13 of make different -- give sort of targeted ads that
14 might be of value?

15 A Location History isn't used for ads targeting.

16 THE COURT: I'm sorry. What was your answer?

17 THE WITNESS: Location History is not used
18 for ads targeting. It's specifically used for ads
19 measurement.

20 THE COURT: For ads --

21 THE WITNESS: Measurement.

22 THE COURT: Measurement. Okay.

23 BY MR. SIMON:

24 Q And I think that you corrected me there. So the
25 point is location is what is used for those types of

McGRIFF - CROSS

407

1 improvements; right?

2 A That's correct.

3 Q Bottom line location, not necessarily what's
4 stored as responsive to this search warrant?

5 A That's correct.

6 Q But they're both, in a broad sense, location?

7 A They are all location, yes.

8 Q But, again, the only thing we get in this case is
9 what's stored in the Sensorvault, and that's only
10 Location History?

11 A That is correct.

12 Q In paragraph 14, I'm just going to ask you to read
13 it and sort of explain for us what you're getting at
14 there.

15 A Let me read the whole thing.

16 So, this specifically speaks to ads measurement,
17 and what I had previously mentioned in the context of
18 the COVID mobility reports or other sort of aggregated
19 deidentified uses of this information. It's not from
20 an advertisement or advertising perspective. It's not
21 that I specifically, as a user, went to a specific
22 space or place.

23 The interest in use here is the effectiveness of
24 I as -- not I at all. That some percentage of people
25 saw this and went to this place.

McGRIFF - CROSS

408

1 So paragraph 14 is speaking at a very high level
2 to the fact that in its aggregate, anonymized form,
3 this information can be used to measure the
4 effectiveness. And so that's the measurement, ads
5 measurement.

6 Not -- no way do we share, and never have we
7 shared, explicitly that I went to a specific place
8 with a third party.

9 Q Understood. But it's used in an aggregated --

10 A Correct.

11 Q In stepping to -- because, again, they're
12 different location services. Just the ability to
13 track location is different than what's stored in the
14 Sensorvault as Location History. So I'm going to ask
15 you about just the location services generally.

16 A Okay.

17 Q Those are -- those coordinates, not relevant to
18 this particular warrant, but if I use Google Maps,
19 say, on my phone, you all would use the coordinates
20 from Google Maps to improve services or me as a user
21 of Google Maps?

22 A I don't know what you mean in that context.
23 Location services at the device level, that would be
24 available to Google Maps. So depending on whether you
25 gave Maps access to -- there's those options you

McGRIFF - CROSS

409

1 mentioned; always, never, while in use. So if Maps
2 did not have access to location, then it would not
3 have location awareness. If you granted Maps while in
4 use, it would only have access to device location
5 while you were using Maps, meaning Maps was in the
6 foreground. And if you said always, then Maps will
7 have location access even when you're not using Maps.

8 So in terms of Maps' specific access to location,
9 it would be determined by those permissions and what
10 the user granted.

11 Q Okay. Let's say a user grants Google information
12 on its location when using Google Maps. Do you use
13 any of that location -- this is different from
14 Location History information, but do you use any of
15 that location to sort of do things like provide
16 realtime traffic updates?

17 A That's a great question. Traffic updates and
18 understanding, there are any number of signals that
19 inform that. Again, that's an aggregate. So it's not
20 somehow my experience driving from here, three blocks
21 over, is directly going to change what you see on your
22 navigation experience.

23 But, you know, if several thousand people drove
24 this way and encountered the same issue, that in
25 aggregate would be reflected. That location signal is

McGRIFF - CROSS

410

1 one of many signals, yes.

2 Q Okay. And things sort of like the -- you
3 mentioned the ads, but if I give Google my location,
4 just generally, you would ensure that I might receive
5 more relevant ads based on location; right?

6 A Are you speaking about a specific app or do you
7 just mean Google generally being location aware?

8 Q I mean, you can talk about it however you want to,
9 but I understand Google has a lot of products, and so
10 I don't think it's of great value to go product by
11 product. But just in general, the use of location
12 information as provided by users, not the Location
13 History, but just location services reporting to
14 Google, do you all use that in terms of offering
15 better services to customers, and if so, how do you do
16 it?

17 A So location is very broad. As I mentioned, you
18 have at its coarsest level location used to understand
19 are we able to deliver a certain type of content in
20 this area where we understand the user to be. Are we
21 able to -- you know, is the user in an area where we
22 should be providing certain services to begin with?
23 That's location at its most coarse level.

24 Then you get down to a still coarse level, just a
25 granular city understanding. If you were to open

McGRIFF - CROSS

411

1 search right now and say "pizza near me" or "baked
2 goods," the search results would be informed by our
3 best understanding at that time of where you are. And
4 that understanding would be directly informed by
5 whatever service -- whatever consented access we have
6 to your location.

7 So if you had completely turned off all other
8 device signals, we will have at a very coarse level if
9 you search for "pizza near me," the fact that that
10 request is hitting our server, we will have some
11 concept, but you might see that the pizza results are
12 all over the Richmond region.

13 If you then enabled -- you can keep going down
14 giving us more access to different controls. You can
15 opt in to Location History on that device and actively
16 be reporting from that device and attempt that exact
17 same query, and we would have a much more refined
18 understanding of when you said "pizza near me," go
19 right outside. There's a place next door.

20 So there are a lot of layers to the onion, but we
21 will look to -- our responsiveness or what we are
22 presenting to the user will be directly informed by
23 what we have access to in that specific context on
24 that specific device for that account.

25 Q I wanted to ask some questions, as well, about,

McGRIFF - CROSS

412

1 just generally, some of the exhibits that came in --

2 THE COURT: So, Mr. Simon. I'm sorry to
3 interrupt you, but do you have a while to go on your
4 cross-examination?

5 MR. SIMON: I don't think a while to go,
6 Judge, but I think 15 more minutes possibly. I was
7 going to ask my co-counsel if they wanted me to touch
8 anything else.

9 THE COURT: Right. You know, we are now
10 hitting in -- it's almost -- it's 20 of one. We've
11 been sitting here for a while. So we could either let
12 you finish if it's going to be -- but I don't want to
13 lose folks. You know, sugar levels may be high or low
14 or whatever it is.

15 MR. SIMON: Okay, Judge. I think we can move
16 it along.

17 THE COURT: Okay. I'm not trying to rush
18 you.

19 MR. SIMON: No, no, I understand.

20 BY MR. SIMON:

21 Q In regards to the functionality of the phone or of
22 a device, when we're talking about, again, the ability
23 to move in realtime and get realtime, like I'm saying
24 traffic updates, that's a location at the device level
25 setting, but also maybe location reporting; right?

McGRIFF - CROSS

413

1 A You have -- yes.

2 THE COURT: So it's location device and
3 Location Reporting, is that what you said, Mr. Simon?

4 MR. SIMON: Yes, Judge.

5 A To be clear, Location Reporting is specifically
6 capital L, capital R, is a subsetting of Location
7 History. If you do not have Location History on, you
8 can't enable Location Reporting. Location Reporting
9 and Location History, distinctly separate from
10 location services at the device level.

11 If location services at the device level are
12 enabled, and you, for example, in your example, I
13 think you were specifically talking about Maps. You
14 would still have the ability to get access to some
15 location awareness to use Maps. You don't use
16 Location History to use Google Maps.

17 Q And that's the case for, really, any realtime sort
18 of update on movements kind of application; right?
19 Location History is not needed for that?

20 A It depends on what specifically you're referring
21 to, but, yes, there are a lot of realtime updates that
22 are possible with only current location, yes.

23 Q With respect to the emails that are sort of, I
24 think, I use the phrase "cherry-picked" from the
25 Arizona litigation that Arizona has with Google. Is

McGRIFF - CROSS

414

1 it your testimony -- it's my understanding that your
2 point is that's indicative of an ongoing sort of
3 conversation that Google employees have.

4 A Google employees have a lot of opinions, yes.

5 Q And to the extent that they've been entered here,
6 I think it's fair to say that you don't generally
7 agree with those opinions as they've been expressed.

8 A Google employees have a lot of opinions. I will
9 always listen to Google employees and what they have
10 to say.

11 Q That worked. But I wanted to also allow you to
12 comment a bit more about Oracle. You mentioned on
13 direct examination that Oracle will give the least
14 favorable view to Google. Can you expand on what you
15 meant by that?

16 A Everyone has a narrative. Some facts fit more
17 comfortably in a narrative than others. That is
18 certainly everyone's privilege in advancing a
19 narrative.

20 Q Mr. McGriff, I realize I went over a number of
21 things with you, but I do want to end with sort of,
22 again, the most, in my estimation, sort of the most
23 important pieces of what we've discussed.

24 Location History is the only information
25 responsive to a geofence search warrant; correct?

McGRIFF - CROSS

415

1 A That is correct, yes.

2 Q And the reason that Google provided only Location
3 History information is because Web & App Activity
4 isn't responsive; right?

5 A It is no longer responsive, that's correct, yes.

6 Q And Google Location Accuracy or services, as it
7 was formerly known, is not responsive?

8 A Not capable of being responsive, yes.

9 Q And when we say "responsive," we're saying you
10 cannot put devices within a certain period of time
11 within a certain radius sufficiently to turn that
12 over; right?

13 A It is not possible, that is correct.

14 Q Okay. And your testimony here today as it relates
15 to Google Assistant is that you're either going to see
16 a consent flow consistent with Location History being
17 on a page with a few other options or Location History
18 being on a page by itself; right?

19 A Reiterating that I am not the Google Assistant
20 product manager, my understanding of that flow is that
21 it is dynamic, and depending on a user's previous
22 activities and interaction with Google products and
23 services, they would see some variation of that flow
24 if they chose to set up Assistant at that time.

25 Q After a user enables Location History information,

McGRIFF - CROSS

416

1 separate and apart from whether they have location
2 services on, they can delete it; right?

3 A Yes.

4 Q Yes?

5 A Yes.

6 Q Okay. And near immediate deletion occurs when
7 they seek to delete it; right?

8 A Yes.

9 Q And, third, they can pause it; right?

10 A Yes.

11 Q And pausing means it is entirely off?

12 A There is no new collection, that's correct.

13 MR. SIMON: No further questions, Judge.

14 THE COURT: All right. I'm going to ask one
15 question. And I'm going to allow you to stand there
16 in case it prompts anything.

17 If I were to log in to a Google function on
18 someone else's phone, where does that Location History
19 go? Does it go to the phone?

20 THE WITNESS: If you had previously opted in
21 to Location History for your account, and then you
22 signed in to another person's phone, if you were --
23 there's a fork there. If on your previous device, you
24 had turned Location History on and were actively
25 reporting for some period of time, and then you

McGRIFF - CROSS

417

1 immediately switched and added your account to another
2 device, then that device would start contributing to
3 your Location History. It would not start
4 contributing to -- let's say it was my device and I
5 didn't have Location History on, you would not
6 suddenly enable Location History for my account. The
7 collection on that device would be to your account,
8 not to my account.

9 THE COURT: Okay. So if I'm on my law
10 clerk's phone, and I log in to my account, say we both
11 have Location History, does the Location History go --
12 where does it go?

13 THE WITNESS: For both of you, and you both
14 have opted in to Location History, then for both of
15 you it will be logged in your accounts on our servers.

16 THE COURT: But if hers is off, then it just
17 goes to me?

18 THE WITNESS: If she has not opted in to
19 Location History or if she has paused it, then there
20 would be no collection for her account from the
21 information on the device. It would only be to your
22 account.

23 THE COURT: All right. I'm not sure that's
24 relevant, but I'm doing my best to make sure I have a
25 full record.

McGRIFF - CROSS

418

1 I don't want to confuse what you've said.

2 Does that prompt a question?

3 MR. SIMON: Judge, that was a fine question
4 for me, but I have -- I do have -- I did want to ask
5 about the 68 percent thing, and it's the last
6 question.

7 THE COURT: That's fine. I'm really not
8 trying to rush you. Some folks sitting just need hope
9 that they're going to stand soon. We've gotten that
10 in their heads, and so everybody can refocus. So do
11 your job. You're fine.

12 MR. SIMON: Understood, Judge.

13 BY MR. SIMON:

14 Q I did want to explore. We talked a little bit
15 earlier about the technological advancement piece. I
16 was asking that in a broad way because I'm not refined
17 in that space, but the GPS points that are returned in
18 the first stage where we say give us everybody who's
19 in the geofence radius, how does Google come up with
20 those points? How does Google assess those points?

21 A I don't believe there's any assessment in the
22 actual sensor data reported. So when I talk about the
23 evolution of technology, if you're using -- think
24 about the device that you were using -- the mobile
25 device that you were using in 2014 versus the device

McGRIFF - CROSS

419

1 that you're using today. Presumably, you've updated
2 your device at least one time maybe. The sensors on
3 your hardware will be immanently better than sensors
4 on older hardware.

5 So when I talk about improvements in technology,
6 it's in the hardware itself and the sensors
7 themselves. We are not doing any interpretation on
8 what the sensors report. The sensors say, "This
9 device was in this place." And we are recording that.
10 I believe it's mentioned in one of my declarations.
11 It is captured in that suite of things that we collect
12 in the location proto.

13 And so we are just saying this device said this to
14 me at this time, captured in time, stored on server.
15 There's no editorializing of that raw location point.

16 Q Okay. And I guess my question is: Do you have an
17 understanding of what goes into creating a GPS point
18 and particularly one that Google would collect?

19 A Nothing beyond sort of the standard sensor
20 information that's collected there and put into the
21 report.

22 Q Okay. And what's the standard sensor information?

23 A We're looking at -- I mean, it's the triangulation
24 of where we have -- you need to be somewhere where you
25 can actually triangulate on at least three satellites.

McGRIFF - CROSS

420

1 So the device needs to be somewhere where you can
2 bounce off of three satellites, and they can say,
3 "Based on these three readings, you are likely here."

4 To my understanding, that is the extent of the
5 limitation of GPS being captured.

6 Q And what about in terms of Google's Wi-Fi
7 collection, Wi-Fi point collection?

8 A If Wi-Fi scans are happening, they are yet another
9 signal that is captured. In terms of the raw point,
10 it is, again, just another piece of information.

11 Q Okay. And no -- does Google sort of assess
12 anything about their Wi-Fi point accuracy?

13 A It's difficult to build a house on a potentially
14 moving foundation. So you could move all of these
15 access points tomorrow, and then your device might
16 think something's different.

17 I don't know if you've had this experience. In
18 San Francisco, if you use BART, the BART station in
19 downtown San Francisco happens to think it's in
20 Oakland. So if you open your phone there and say, "I
21 want an Uber," it will think you're in Oakland.
22 That's just how they've assigned and how they're
23 handling data through their Wi-Fi network. So those
24 are possible, but we don't make any -- I don't have
25 any statements on the quality or how that might shift.

McGRIFF - CROSS

421

1 Q But Google -- I guess the assessment by Google of
2 the Wi-Fi access points is in that display radius.
3 The assessment of the Wi-Fi points is in the display
4 radius, and, as you testified earlier, that 68 percent
5 goes to whether they're inside that display radius?

6 A That's correct.

7 Q All right.

8 MR. SIMON: No further questions, Judge.

9 THE COURT: All right.

10 MS. KOENIG: Your Honor, I have a pretty
11 short redirect, and so I think no more than 10
12 minutes. And so if that gives everybody enough
13 hope --

14 THE COURT: I'm telling you, like, my court
15 reporter is -- it's just too much.

16 MS. KOENIG: Okay.

17 THE COURT: I appreciate your effort, but I
18 usually try to keep it at an hour and a half or two,
19 and that's largely because of the sort of focus that
20 certainly Ms. Daffron has, but also a witness could
21 use a break. So I appreciate your effort, but I think
22 we are going to take a lunch break.

23 MS. KOENIG: Okay.

24 THE COURT: All right. So we're now at
25 almost one. Can we do 1:30? Does that give people

McGRIFF - CROSS

422

1 enough time?

2 MR. SIMON: That works, Judge.

3 THE COURT: All right. So, I'm going to tell
4 you that I actually don't know the status now, but as
5 we were beginning to speak, we have learned that AT&T
6 had opened a ticket to the problem, and it's on their
7 end. And they did not have a time frame for
8 resolution. So we may know more now, but I'm not
9 going to ask. We'll update you as we come back in.
10 So I think we certainly made the right call.

11 I do want us to be cognizant of time. We
12 still have witnesses to go. And so I really am going
13 to ask you all to -- we spent a lot of time with
14 folks, and I want the questioning to be crisp and
15 thoughtful. I want you to do your job, but I really
16 wasn't sure we'd go over into today, and that we still
17 have as many witnesses as we do is shocking to me.

18 So I'm just going to put that bug in your
19 ear, and hope that you are -- now that we have lots of
20 foundation about how Google works and other things,
21 that we just do what we need to do from here on out.

22 MR. SIMON: Understood, Your Honor.

23 THE COURT: All right. Mr. McGriff, thank
24 you. You are coming back, apparently, just for 10
25 minutes or so. So you're still under oath. And I do

McGRIFF - CROSS

423

1 appreciate everybody's good efforts. All right?

2 Thank you.

3 (Luncheon recess taken at 12:53 p.m. until
4 1:30 p.m.)

5 THE COURT: All right. So we're continuing
6 our hearing. Do we have any AT&T participants?

7 THE CLERK: No.

8 THE COURT: No. All right. Well, hopefully,
9 you were able to speak with your colleagues.

10 All right. So we're prepared for
11 cross-examination.

12 Mr. McGriff, are you chilly?

13 THE WITNESS: Sorry. I was outside earlier.

14 MS. KOENIG: I think we're on redirect, but
15 it is an adverse redirect.

16 THE COURT: Oh, adverse redirect.

17 MS. KOENIG: It feels like a lot of cross
18 today, I will agree.

19 THE COURT: Yeah, I got distracted.

20 Do you want us to hang that up for you, sir?

21 THE WITNESS: No, this will be fine. Thank
22 you.

23 THE COURT: Okay.

24

25

McGRIFF - REDIRECT

424

1 REDIRECT EXAMINATION

2 BY MS. KOENIG:

3 Q Good afternoon, Mr. McGriff.

4 A Hi.

5 Q I'm Laura Koenig. We met in the hallway outside
6 of court yesterday.

7 THE COURT: You definitely have to talk into
8 microphone and slowly.

9 MS. KOENIG: Thank you.

10 BY MS. KOENIG:

11 Q I'm Laura Koenig. We met yesterday outside of the
12 courtroom. And I'm one of Mr. Chatrie's attorneys.

13 I have a question based on the Court's question to
14 you at the end of -- toward the end of Mr. Simon's
15 questions. When the Court asked if Judge Lauck were
16 to put her, if she had a Google account, if she had
17 put it on her law clerk's phone, and both Judge Lauck
18 and her law clerk had enabled Location History in
19 their accounts, would the phone report the device's
20 location in the Location History timeline to both the
21 clerk's account and to Judge Lauck's account?

22 A There are a few variables, but, to be clear, if
23 the clerk -- the actions of the clerk and the
24 Judge's -- the clerk and Judge's accounts are fully
25 separate as it pertains to Location History. Nothing

McGRIFF - REDIRECT

425

1 that either does impacts the other's account. So
2 anyone adding their account to another device or vice
3 versa does not impact what that specific account has
4 consented to or not.

5 If both accounts had Location History -- it's
6 irrelevant, but if both accounts had Location History
7 on, and then they were added to the same device, then
8 both accounts would be updated with information as
9 reported from the sensors on that specific device.

10 Q Okay. So if the law clerk takes the phone
11 independently to her own home, it would indicate on
12 Judge Lauck's timeline in Judge Lauck's Location
13 History timeline that Judge Lauck's account or device
14 that was activated, her Location History would
15 indicate a mark at the law clerk's home?

16 A Yes. That is one of the reasons why, with varying
17 degrees of success, I try to always be consistent in
18 saying it is where a device is, not necessarily that
19 the person is with the device they are signed into.

20 Q I appreciate precision. Thank you.

21 Going back to the questions that Judge Lauck was
22 asking at the end of Mr. Price's question, I want to
23 make sure that I am clear, because there's pause and
24 deletion. So if a user pauses Location History, the
25 data that had previously been -- the Location History

McGRIFF - REDIRECT

426

1 data that had previously been connected and placed in
2 the Sensorvault, pausing Location History does nothing
3 to remove that data from Sensorvault; right?

4 A That is correct, yes.

5 Q And, similarly, if I were to delete Location
6 History that had previously been stored in the
7 Sensorvault, that does nothing to change -- that
8 action by itself does nothing to change that my device
9 will continue sending Location History data to
10 Sensorvault?

11 A If Location History is on for the account and a
12 user goes and deletes all or some subset of the data
13 collected for that account, it will not impact the
14 fact that Location History is on for the account. The
15 user would have to explicitly turn Location History
16 off for the account.

17 Q And so, therefore, it would continue moving
18 forward past that deletion point collecting the data;
19 right?

20 A That is correct, yes.

21 Q Okay. Government's Exhibit 12, which was that
22 video that we had a little discussion about, do you
23 remember that video?

24 A I do.

25 Q At the beginning of that video, I think a matter

McGRIFF - REDIRECT

427

1 of seconds into that video, there was a terms and
2 conditions screen. Do you remember seeing that?

3 A I do, yes.

4 Q And that terms and conditions screen, that was
5 Samsung's terms and conditions; right?

6 A I believe so, yes.

7 Q Okay. In terms of the privacy policies that we've
8 been looking at on the website versions, those are the
9 complete privacy policies that Google sets forth on
10 their website; right?

11 A Those are our published privacy policies, yes.

12 Q And when a user activates a cell phone, do they
13 get an abbreviated version of the privacy policy when
14 they go through the process of setup?

15 A I don't actually know and certainly can't speak to
16 the broader ecosystem of products and services where a
17 user might create an account or see that.

18 I can't speak to the format of whether it's a --
19 of how it's presented. I'm sorry. I wouldn't be able
20 to say anything with certainty about that
21 presentation.

22 Q So the answer is you don't know?

23 A I don't know, yeah.

24 Q When we are talking about the data that is in
25 Sensorvault, this is data that is for worldwide users;

McGRIFF - REDIRECT

428

1 correct?

2 A If you are able to create a Google account now,
3 you are able to opt in to Location History. We don't
4 collect Location History in every area, but you are
5 able to opt in to the control if you are able to
6 create a Google account.

7 Q So let's go through. What areas do you not
8 collect Location History from?

9 A I don't have the exhaustive list in my mind, but
10 they are whatever U.S.-sanctioned countries, I
11 believe. So if you traveled to China, I believe we
12 will not collect for you there. So that's if a U.S.
13 account holder who has opted in to Location History
14 travels to China and, you know, or for some reason we
15 detect that you're in a region where we can't collect,
16 we won't. But I apologize. I rarely look at that
17 list. So I don't know all of the countries that are
18 on that list.

19 Q Sure. China has a few people in that country;
20 right?

21 A Yeah.

22 Q So any person who is living in China and has a
23 Google account, they would not be able to generate
24 Location History on their phone or through their
25 device?

McGRIFF - REDIRECT

429

1 A It gets complicated around all the heuristics that
2 we would use to understand where a user is. So I
3 can -- you know, how do you handle Hong Kong? What do
4 you do if the user connects via VPN and spoofs their
5 location to say they're somewhere else? There are
6 just a host of variables.

7 We do our best through a set of heuristics to
8 identify where we believe a user is, and in good faith
9 attempt to identify when a user is in a sanctioned
10 area. If we believe on our side that a user is within
11 a sanctioned area, we will stop collection. But,
12 again, some signals are more explicit than others.

13 A Chinese-based SIM, for example, would be a very
14 strong signal that this is probably a device that
15 should not be collected.

16 Q Sure. So when we're talking about the two-thirds
17 of active Google users that you're not collecting
18 Location History data on, that includes some of these
19 people -- right? -- that live in countries where you
20 just simply don't collect location data; right?

21 A If I'm remembering the statement, the statement is
22 that only one-third of the accounts have the control
23 on. So are you -- you're saying of the users who have
24 not enabled Location History for their account --

25 Q Let's go back and look at the statement.

McGRIFF - REDIRECT

430

1 A Yeah.

2 Q So if you can turn to your first declaration,
3 which is Exhibit No. 21, and I believe your
4 numerous-tens-of-millions statement is in paragraph
5 13. So the statement says, in paragraph 13, second
6 sentence, "While a more precise percentage is
7 difficult to calculate, in part due to fluctuating
8 numbers of users, in 2019 roughly one-third of active
9 Google users, i.e., numerous tens of millions of
10 Google users had LH enabled on their accounts."

11 So when we went back to Mr. Price's questions
12 earlier this --

13 THE COURT: You just have to be sure we can
14 hear you and you're not going too fast.

15 MS. KOENIG: Thank you.

16 BY MS. KOENIG:

17 Q When we go back to Mr. Price's questions from this
18 morning about how it is that you got to that one-third
19 figure, it appears from what you put in paragraph 13
20 that you looked at all -- the broader number of Google
21 users in the first sentence; right? You start with
22 the math of how many Google users do we have?

23 A That's correct. The number of -- specifically,
24 the statement refers to in the way this is usually
25 measured in terms of active Google users. So it's not

McGRIFF - REDIRECT

431

1 simply that there's an account, but it's an actual
2 active account.

3 Q Sure. Fair enough. Active Google users.

4 But then when you're looking at the one-third, it
5 indicates it's one-third of active Google users who
6 had enabled Location History on their accounts; right?

7 A That's correct.

8 Q But I think what I'm hearing you say, and I want
9 to make sure I'm hearing you right, is that some
10 Google users who are active would not be able to
11 activate Location History simply because of where they
12 are?

13 A Yes, that is true.

14 Q Okay. And going back to the question, I think,
15 that Mr. Simon was trying to ask, but I want to make
16 sure I'm clear about the answer again, he asked you,
17 like, would it be possible to segregate data points in
18 the Sensorvault by geographic location. And I believe
19 your answer to that question was yes; right?

20 A Sensorvault is indexed, as I mentioned -- I don't
21 remember whose question it was. Sensorvault is
22 indexed by Google account. So all of the tools are
23 designed to search and query generally by account. So
24 it is not possible today to say to Sensorvault you
25 can't query by location directly. You have to do it

McGRIFF - REDIRECT

432

1 by account. You need to search each account, and then
2 see within that account do you have any coordinates
3 that fit this area.

4 Unfortunately, we're not able to search across all
5 the accounts at a high level and say show us all the
6 accounts in this area.

7 Q So Sensorvault is not segregated by geographic
8 location?

9 A It is not, no.

10 Q Sensorvault is also -- the data that is produced
11 in response to a geofence warrant is nothing that --
12 that that data -- Google would never otherwise produce
13 that type of data from the Sensorvault; right?

14 A The warrant includes -- when you say "that type of
15 data," what are you --

16 Q Yeah. That was not a great question. Let me
17 phrase that again. So when you get -- the ultimate
18 result of a geofence data is that at the third stage
19 identifying information from a user's account can be
20 turned over based on the link to the device ID that is
21 stored in Location History; is that right?

22 A That is correct.

23 Q And aside from a geofence warrant, you would never
24 otherwise produce that information from the
25 Sensorvault?

McGRIFF - REDIRECT

433

1 A There is no other instance where I'm aware that we
2 do that; that's correct.

3 Q It's not a practice that Google normally does to
4 produce identifying information through the Location
5 History database?

6 A That is correct, yes.

7 Q So it's certainly not at business practice that
8 you have; right?

9 A That is correct, yes.

10 Q Okay. You have been the Location History Product
11 Manager since 2016?

12 A That is correct, yes.

13 Q And how many people are there on the Location
14 History teams? I'm assuming there are more than one
15 team.

16 A It is difficult to answer. Do you mean in terms
17 of product managers, software engineers?

18 Q Let's talk about how many -- how many different
19 kinds of teams do y'all have over at Location History?
20 Probably a few; right?

21 MR. SIMON: Judge, I think in keeping with
22 the Court's -- I'll use the word "admonition" before
23 we left, I'm going to object as outside the scope. I
24 did, obviously, ask about the emails, but I didn't go
25 into how many people worked with him or was he the top

McGRIFF - REDIRECT

434

1 guy as compared with 15 others under him. I just
2 think it's outside the scope, and we should move on to
3 the next witness, Judge.

4 MS. KOENIG: Sorry. Actually, Judge, this
5 question is completely unrelated to the emails, but
6 it's more related to -- Mr. Simon was asking some
7 questions about what Google uses Location History for.
8 I'm just trying get a sense of how many employees are
9 dedicated to this Location History project.

10 THE COURT: All right. I'll allow it.

11 A Directly in terms of fully dedicated, I believe
12 everyone involved has multiple responsibilities.
13 Fully dedicated, it would be tens. In terms of
14 engineers, yeah, I would say tens.

15 Q Then there are additional probably tens or dozens
16 of other people who work with you all but are not
17 fully dedicated?

18 A Well, there are -- as I mentioned when I was asked
19 about my role, I look over Location History, but I
20 also look over a host of other features and products
21 within Maps.

22 Then you have, for example, there is a marketing
23 team that supports geo as a whole. I don't have a
24 direct marketing need every day, so I don't have a
25 dedicated -- there's no dedicated marketing resource

McGRIFF - REDIRECT

435

1 for our platform. There is a dedicated resource. We
2 just don't call them that -- or that resource has
3 other responsibilities.

4 Q Sure.

5 A Similarly, we have a writer that we work with.
6 The writing team works with several teams. So I don't
7 include them in that group of sort of horizontal
8 resources that we leverage that would very much be a
9 part of our team but not fully dedicated to our team.

10 Q Sure.

11 A In terms of fully dedicated to our team, the best
12 reference would be software engineers, and we have
13 tens working on this project.

14 Q Tens with an S at the end; right?

15 A Tens with an S on the end, yeah.

16 Q So is it fair to say that Location History is an
17 important project or product for Google?

18 A I won't feign to know Google's broader
19 prioritizations and where we sit in that stacking. We
20 are certainly one team within the sort of broader
21 scope of location, yes.

22 Q And it's certainly not Google's goal to diminish
23 the number of users of Location History; right?

24 A No.

25 Q In fact, it would be more likely that it is

McGRIFF - REDIRECT

436

1 Google's goal to increase the users of Location
2 History; right?

3 A That's fair, yes.

4 Q So let's go back to what Location History does.
5 So Location History tracks where a user's device is;
6 right?

7 A Yes, for users who opt-in, yes.

8 Q And it can track a user every hour of the day;
9 right?

10 A There are a host of variables involved there, but
11 yes, if a user has Location History enabled, we will
12 collect whatever we have -- whatever is accessed from
13 that device.

14 Q And Location History can actually track a user
15 hundreds of times a day; right?

16 A Depending on activity, yes.

17 Q Maybe even thousands of times a day?

18 A I don't think it would get that high.

19 Q There are only so many minutes; right?

20 A Well, there's also the reality if it got that
21 high, there are just general device performance
22 questions and other things, so yeah. There is some
23 upper bound.

24 Q Fair enough. Location History can track a user
25 even when the user is not actually using the app from

McGRIFF - REDIRECT

437

1 which they enabled Location History. We have gone
2 over that; right?

3 A It varies by platform, Android versus Apple, but
4 yes.

5 Q And as we know, unless a -- when a user deletes
6 the past Location History, unless a user affirmatively
7 disables Location History, Google continues to collect
8 the future Location History data points from that
9 device?

10 A Sorry. I can't parse that.

11 Q So when a user deletes the past Location History,
12 unless that user goes out on their own and
13 affirmatively disables Location History; right?

14 A That is correct. Deletion is a separate process
15 from turning on --

16 Q Let me make this more simple. Let me take out
17 that middle part. So when a user deletes past
18 Location History, Google continues to collect the
19 future Location History from that device; right?

20 A Yes.

21 Q Okay. And as we know, I think you've indicated
22 earlier today, Google is going to respond and turn
23 over data in response to search warrants; right?

24 A It is my understanding that we will respond to any
25 valid request when compelled, yes.

McGRIFF - REDIRECT

438

1 Q Okay. And you said yesterday, and I think even
2 the exact quote you used today or statement you made
3 today was, We are always looking for ways to further
4 improve and clarify how we talk about the product;
5 right?

6 A All products, yes.

7 Q But also specifically included in that, Location
8 History; right?

9 A Yes, including Location History.

10 Q And so it would be pretty clear if the descriptive
11 text -- right? -- that line that is right below
12 Location History before you hit the drop down arrow,
13 it would be pretty clear if the descriptive text at
14 the opt-in stage said something like, If you enable
15 Location History, you'll be allowing us to track you.
16 You will be allowing us to track you every hour of
17 every day. You will be allowing us to track you even
18 if you're not using this particular Google
19 application. You will be allowing us to continue
20 tracking you if you delete your past Location History.
21 We turn your Location History over to law enforcement
22 when they get a valid warrant. That would make more
23 clear what's happening; right?

24 A That would provide additional clarity for some,
25 yes.

McGRIFF - REDIRECT

439

1 Q But you're not going to do that; right?

2 A I respectfully disagree with that suggestion.

3 That is entirely -- the ongoing evolution in any
4 product is to be more clear, be more precise. We are
5 steadily looking for ways to improve all products and
6 services, including Location History. In part, the
7 warm welcome notice, the email, the monthly emails we
8 created, the now yearly summary email that we send,
9 all of those not only tell you what we collect, but
10 give a very visual and clear tangible way.

11 So it's not just words. Hey, here are a blurb of
12 words that most nonlawyers or privacy-minded people
13 will never read. We actually visualize it and make it
14 very tangible. You went from point A to point B.
15 Here is what we understand those places to be. Here
16 is how we understand you traveled between point A and
17 point B, all with an eye toward making it very human
18 readable and consumable in a tangible way.

19 Q Sure. And I appreciate that that's the back-end
20 take that you all have done; right? But those emails,
21 that presumes that someone's going to open up
22 something that they might otherwise presume is junk
23 mail; right?

24 A That is why we have rolled out both notices that
25 were originally tied just to Maps. And to the point

McGRIFF - REDIRECT

440

1 you just made, in this time frame, we expanded to make
2 it an operating system notification. So at the OS
3 level, whether or not you're using a Google product or
4 service, it just appeared Location History is enabled
5 for this account.

6 And any interaction with that notification, open
7 settings, where very promptly a user would see that is
8 on and be able to turn it off. So it's not just that
9 we had a per product notification. It's not that we
10 simply sent one email. We send monthly emails. We
11 send an annual email. We send an email seven days
12 after opt-in. But in addition, we now also do it at
13 the OS level.

14 So we've steadily rolled out continued
15 notifications and prompts, and on all of them at the
16 top we prominently feature the controls to disable it
17 if the content that the user sees highlighted there is
18 not what they intended.

19 Q Sure. But wouldn't the most clear way be to just
20 put all that in the descriptive text, so when the
21 person turns it on, they know exactly what they're
22 getting into at that moment?

23 A That assumes that every user is reading the
24 descriptive text in detail. What you just read would
25 have been a full page of text, so on most mobile

McGRIFF - REDIRECT

441

1 devices a wall of text appearing.

2 It's certainly possible. I can't say that you're
3 wrong. But I would say, again, that's a wall of text,
4 and it is not -- I'm not aware of anything that would
5 suggest that users would be more inclined to read a
6 wall of text versus a blurb of text. I'm not aware
7 that anyone has come to the proper exact science that
8 two-thirds of a full screen versus one-third is right.

9 I think part of this evolution over the years has
10 been: What is the way to reach users where they are?
11 So for the user who doesn't read or expand the carrot,
12 for the user who maybe moves quickly past that but
13 will see the email in seven days, for the user who
14 doesn't see emails but will get an app notification,
15 for the user who dismisses all notifications -- like,
16 you're trying to figure out the best way. There's no
17 slam dunk for any of them would be my opinion.

18 Q Sure. And it sounds like it's fair to say that
19 you all are very aware at Google that people are not
20 inclined -- users are not inclined to read blocks of
21 text; right?

22 A Some are, to be quite clear. If they weren't,
23 Location History opt-in would be 100 percent. Some
24 people are reading it. The majority of users are
25 reading it and saying no.

McGRIFF - REDIRECT

442

1 Q Or it's the people that are in China that can't
2 activate it; right? When you're saying the majority
3 of people, you can't assume that the majority of
4 people are making an informed decision to not opt-in.
5 You don't have an evidentiary basis to say that;
6 right?

7 A I'm sorry. Just so I'm clear, are you suggesting
8 that we -- that Google, as a company, has majority of
9 its users in China?

10 Q No, no, no. I'm saying that when we are talking
11 about the other two-thirds of Google -- active Google
12 users who have not enabled Location History, you
13 indicated that that feature of the two-thirds includes
14 people who have these devices in countries where they
15 cannot enable Location History; right?

16 A Anywhere you can create a Google account, you can
17 enable Location History. We may not be able to
18 collect data in that region based on where you travel
19 or any kind of variables, but you can still opt-in on
20 the account level.

21 The reason for that is I can create a Google
22 account right now on a desktop or my laptop, not
23 connected to a mobile device. I may never attach a
24 mobile device to my account. I still have Location
25 History on for an active Google account.

McGRIFF - REDIRECT

443

1 Q Sure. But then if you are not -- let's say you
2 activate a Google account in China; right? You
3 activate it in the United States. You buy the phone
4 and you're here visiting.

5 MR. SIMON: Judge, I'm going to object. The
6 witness has testified that Location History --

7 MS. KOENIG: I'll move on, Your Honor. I'll
8 move on. It's not an important point.

9 BY MS. KOENIG:

10 Q But going back to the part you all are very aware
11 that some users, if not many users, will not read
12 blocks of texts; right?

13 A I disagree with that characterization of my
14 statement. We are aware that there are a wide range
15 of users, different proclivities in terms of what they
16 will and will not do. Our focus is figuring out the
17 way to reach as many users as possible, which is why
18 we steadily refine the tools that we use to reach
19 users.

20 Some will resonate with some users. Some will
21 not. That's why we continue to refine and evolve.
22 That is what I keep referring to as the further
23 improvements. You never stop. You are always looking
24 at ways you can improve these flows.

25 Q But at no time in 2018 or 2019 did we have

McGRIFF - REDIRECT

444

1 something as clear as what we decided today, that
2 language that I proposed to you, that was never
3 apparent to a user in the descriptive text; right?

4 A We never used the copy that you just suggested in
5 any flow that I'm aware of, that is correct.

6 MS. KOENIG: No further questions, Your
7 Honor.

8 THE COURT: All right. May this witness be
9 excused?

10 MS. KOENIG: Yes.

11 MR. SIMON: From the United States, yes,
12 Judge.

13 THE COURT: All right. So, Mr. McGriff, I
14 want to thank you very much for your time. You are
15 excused. We appreciate your coming in. You still
16 can't talk to other witnesses certainly about what
17 you've testified to. And, in fact, we should
18 sequester the testimony until this hearing is over.
19 All right? Thank you, sir.

20 (The witness was excused from the witness
21 stand.)

22 MS. KOENIG: Your Honor, next the defense
23 calls Sarah Rodriguez.

24 THE COURT: So that is Sarah Rodriguez, Madam
25 Court Reporter.

RODRIGUEZ - DIRECT

445

1 MS. KOENIG: I'll have her spell her name.
2 Don't worry.

3
4 SARAH RODRIGUEZ, called by the Defendant, first
5 being duly sworn, testified as follows:

6
7 THE COURT: Before you sit down, have we
8 cleaned out that area?

9 MS. KOENIG: I don't believe we have.

10 THE COURT: So, Ms. Rodriguez, I'm just going
11 to ask you to step aside a little bit so we can apply
12 some disinfectant. Sorry. That's awkward, but I'd
13 rather be safe.

14 Thank you so much for helping with that.

15 Ms. Rodriguez, my court reporter can only
16 hear you through the microphone. So you can take your
17 mask off. Obviously, we're cleaning things off. And
18 you have more disinfectant, towels, and hand sanitizer
19 anytime you want to use it. Okay?

20 THE WITNESS: Thank you.

21 DIRECT EXAMINATION

22 BY MS. KOENIG:

23 Q Good afternoon.

24 A Good afternoon.

25 Q You are here today -- oh, please tell us your

RODRIGUEZ - DIRECT

446

1 name, please.

2 A Sarah Rodriguez.

3 Q Can you spell your last name for the record,
4 please.

5 A R-O-D-R-I-G-U-E-Z.

6 Q Thank you. And you are here today in response to
7 a defense subpoena; right?

8 A I believe so. I haven't seen the subpoena myself,
9 but that's what I've been told, yes.

10 Q Fair enough. And you work at Google; right?

11 A That's correct.

12 Q And you just moved into a new position very
13 recently there; right?

14 A About a month ago, that's correct.

15 Q And so you are currently a Tooling and Programs
16 Lead and Legal Investigation Support?

17 A That's correct.

18 THE COURT: A what? What was the first word?

19 MS. KOENIG: Tooling and Programs Lead.

20 THE COURT: Tooling?

21 MS. KOENIG: Tooling.

22 THE COURT: Okay.

23 Q Lead and Legal Investigation Support?

24 A That's correct.

25 Q And it seems as though you all at Google tend to

RODRIGUEZ - DIRECT

447

1 refer to Legal Investigation Support as LIS?

2 A That's correct.

3 Q And before you were the Tooling and Programs Lead,
4 you were a Team Lead -- right? -- for Legal
5 Investigation Support?

6 A Correct.

7 Q And how long had you done that?

8 A I had done that for about two and a half years.

9 Q Maybe three years, one month?

10 A Correct.

11 Q And before that you were a legal specialist at
12 Google?

13 A That's correct.

14 Q What were your duties as a legal Specialist at
15 Google?

16 A I worked on a domestic criminal team. And our
17 team processed law enforcement requests for user data
18 coming in the form of subpoenas, court orders, and
19 search warrants.

20 Q And you graduated from San Francisco State
21 University in 2004?

22 A That's correct.

23 Q That was with a Bachelor's of Arts in Liberal
24 Studies?

25 A Correct.

RODRIGUEZ - DIRECT

448

1 Q You have not gone to law school; right?

2 A I have not.

3 Q And you don't have any other advanced degrees?

4 A That's correct.

5 Q So your experience in the legal investigation
6 support team is practical; right?

7 A Correct.

8 Q In response to a subpoena to Google that
9 Mr. Chatrie had obtained in 2020, you wrote a
10 declaration; right?

11 A Correct.

12 Q In the big binder that is right in front of you,
13 we've got a bunch of tabs in there. Thankfully, you
14 don't get asked about too many of them, I think. But
15 you made a declaration on March 11 of 2020. Does that
16 sound right?

17 A Correct.

18 Q And you made that declaration under oath?

19 A Correct.

20 Q And if you can turn to tab Defendant's Exhibit
21 24 --

22 MS. KOENIG: And Ms. Hancock, if I can have
23 the screen over here activated, that would be helpful.

24 Q If you'll take a look at that for just a moment.
25 It's Defense Exhibit 24. So it should be -- there we

RODRIGUEZ - DIRECT

449

1 go. Is that a copy -- is Defense Exhibit 24 a copy of
2 the declaration that you signed on March 11, 2020?

3 A It appears to be.

4 MS. KOENIG: And, Your Honor, I move to
5 introduce Defense Exhibit 24.

6 THE COURT: Any objection?

7 MR. SIMON: No objection, Judge.

8 THE COURT: All right. It will be entered.

9 (Defense Exhibit No. 24 is admitted into
10 evidence.)

11 BY MS. KOENIG:

12 Q I want to turn your attention now to your
13 responsibilities when you were at your most recent
14 position at Google as the Team Lead for LIS. Your
15 responsibilities as that Team Lead included processing
16 law enforcement requests directed at Google; right?

17 A That's correct.

18 Q And geofence warrants were a part of those law
19 enforcement requests; right?

20 A That's correct.

21 Q When did Google begin receiving geofence warrants?

22 A To my knowledge, I believe our first came in in
23 2016. I'm not exactly sure when within that year, but
24 that's the first that I was aware that we were
25 receiving those.

RODRIGUEZ - DIRECT

450

1 Q By June of 2019, how many geofence warrants had
2 Google received?

3 A I don't know the numbers as of that month,
4 specifically. In 2019, I believe we received around
5 9,000 total requests for warrants specifically with
6 some subset of that.

7 Q 9,000 total warrants and a portion of those
8 warrants were geofence warrants?

9 A 9,000 total geofence requests. So, in some cases,
10 law enforcement isn't aware that they need to submit a
11 warrant. So they may have submitted other lower level
12 legal process to obtain records. So that's included
13 in those 9,000. So, some subset was specific
14 warrants.

15 Q Okay. And a geofence warrant -- we've talked
16 about this a lot. I'm just going to ask you a couple
17 questions to make sure that you're on the same page as
18 we all are.

19 A geofence warrant is one that requests all
20 Location History data that Google has for a particular
21 geographic area in a particular time frame; right?

22 A That's correct.

23 Q And the warrant does not identify, necessarily, a
24 particular suspect; right?

25 A Not in a way that Google would typically be able

RODRIGUEZ - DIRECT

451

1 to process it.

2 Q So when we're talking about what Google turns
3 over, Google turns over all of the Location History
4 data points within that defined area and defined time
5 frame.

6 A I'm sorry. Can you say that again?

7 Q Google turns over all Location History data points
8 that you all calculate fall within that geographic
9 area and that defined time frame; right?

10 A Correct.

11 Q And each Location History data point is associated
12 with a device ID number; right?

13 A Correct.

14 Q Each data point that comes from that same device
15 will have the same device identification number.

16 A So the device ID's reference within Location
17 History, yes, I believe that's correct. A user may
18 have multiple devices reporting Location History, in
19 which case that device might be different per user,
20 but per device, that should be accurate, correct.

21 Q If I have a phone right here, and I'm reporting
22 Location History, my phone has one device ID in the
23 Sensorvault database; right?

24 A Related to your Google account. So if another
25 Google account is associated with that same device and

RODRIGUEZ - DIRECT

452

1 is reporting Location History from that device, then
2 that separate Google account may have a different --

3 Q Thank you for that clarification. I'm sorry. I
4 stepped over the words. Thank you for that
5 clarification.

6 THE COURT: Ms. Koenig, please slow down.

7 MS. KOENIG: Okay.

8 THE COURT: I can barely hear you, which I'm
9 pretty sure means that Ms. Daffron can't type that
10 fast.

11 MS. KOENIG: Okay. Thank you.

12 BY MS. KOENIG:

13 Q Let's turn to Defense Exhibit 3. I'm not going to
14 put it up on the screen. It's something that we have
15 put under seal, but if you can look at Defense Exhibit
16 3, please.

17 I'll just tell you that this is the -- what the
18 government produced to the defense as the returns in
19 the Google correspondence that were provided in
20 connection with the returns as it relates to this
21 specific case.

22 A Okay.

23 Q So if you turn to page 6 of Exhibit 3, which is
24 just the beginning of the first spreadsheet for the
25 Stage 1 return.

RODRIGUEZ - DIRECT

453

1 A Okay.

2 Q In that column, we see the label "device ID";
3 right?

4 A Correct.

5 Q And we just went over that the device ID -- I
6 guess the better way to phrase it would be the device
7 ID is unique to each device as it relates to one
8 account on the device?

9 A Correct.

10 Q So, for example, the first device ID that is
11 identified -- I'm on page 6 of Defense Exhibit 3 --
12 that has five data points that were generated for that
13 device ID; right?

14 A Yes, that would appear to be the case.

15 Q And then it goes on to list a bunch of other data
16 points for other device IDs; right?

17 A Correct.

18 Q And ID is just an abbreviation for identification?

19 A Right. And specifically within this Location
20 History realm. So these device IDs are not
21 identifiers for any other specific Google account.
22 It's not cross-referenced outside of Location History.

23 Q Sure. And that's a point I want to talk about
24 with you. So within Location History, if I have my
25 cell phone here, I have just one Google account that's

RODRIGUEZ - DIRECT

454

1 associated with that phone. That is my phone's device
2 ID as it resides in the Location History database;
3 right?

4 A In the context of Location History, yes, this
5 device ID that's listed here is the one that's related
6 to your Google account and the device that's reporting
7 that data and stored within your Google account.

8 Q And so if, let's say, the Chesterfield County
9 Police Department gets more than one -- I'm pointing
10 at them because that's who this law enforcement agency
11 is. If they get more than one geofence warrant, and
12 my device ID number for that cell phone is swept up in
13 a warrant, warrant No. 1, and it gets swept up in a
14 second warrant, if that same device ID number shows
15 up, it's the same device attached to that one account;
16 right?

17 A To my knowledge, that would be the case. I'm
18 not -- our team isn't responsible for defining these
19 device identifiers. So if there's any sort of
20 collisions on the actual side that we pull the data
21 from, I wouldn't be aware of that.

22 Q But you have no information to the contrary;
23 right?

24 A Correct.

25 Q Okay. So, in response to geofence warrants

RODRIGUEZ - DIRECT

455

1 generally, Google developed a process for handling
2 such warrants; right?

3 A Correct.

4 Q And Google requires as a part of that process that
5 the geofence warrant have a defined geographical area;
6 right?

7 A Correct.

8 Q Is there a geographical area that Google considers
9 too big?

10 A Not generally. It's very contextual to each
11 individual warrant that we review. So it would be
12 determined based on that specialist who's handling the
13 warrant to review, and then coordinate with our legal
14 counsel to determine if it's a warrant that we need to
15 have sort of a conversation with the law enforcement
16 agent that had submitted it.

17 Q Okay. So, are there parameters -- and if --
18 let's -- so it sounds like there is a process; right?
19 The warrant comes in to a Google specialist; right?
20 You have to say yes or no. I see you shaking your
21 head, but we have to make a record.

22 A Sorry. Yes. So it would come into our system,
23 and then a specialist would pick that warrant up to
24 start processing it.

25 Q And it's up to the specialist to decide if it

RODRIGUEZ - DIRECT

456

1 seems too big, like, the geographic area is too big?

2 A It's up to the specialist to determine if it needs
3 further review by our counsel team.

4 Q If the specialist thinks, eh, this just looks too
5 big, they go to the lawyers; right?

6 A They'll take it to the lawyers. There may be an
7 intermediate step where they engage with a law
8 enforcement officer to collect more information about
9 the investigation itself to provide that context in
10 our consult with legal counsel.

11 Q So that process happens -- that back and forth
12 process happens between Google and its various
13 employees and counsel and with the law enforcement
14 officer; right?

15 A That's correct.

16 Q So Google also -- when did Google create this
17 three-step process?

18 A I believe there was discussion around it in 2018.
19 And the discussion also involved agencies within law
20 enforcement. So our, like, CCIPS is an agency that
21 works -- that we often engage with -- not us
22 specifically, but our counsel engages with to discuss
23 sort of certain procedures that may be relevant for
24 the way that we -- that Google will need to handle
25 these types of requests, especially with reverse

RODRIGUEZ - DIRECT

457

1 Location History being a relatively new type of
2 request that Google has started to receive.

3 THE COURT: So, Ms. Rodriguez, I'm going to
4 ask you to say the words of the agency that you just
5 gave the initials for so our court reporter can get it
6 on the record.

7 THE WITNESS: I'm not sure what it stands for
8 exactly. So I know it's computer crimes, but it's a
9 federal agency that is related to the handling of
10 those types of requests.

11 THE COURT: And the full acronym is?

12 THE WITNESS: CCIPS, C-C-I-P-S.

13 THE COURT: I'm sorry?

14 THE WITNESS: C-C-I-P-S.

15 THE COURT: Okay. Thank you.

16 BY MS. KOENIG:

17 Q Do you know when in 2018 that that policy was
18 developed?

19 A I don't know exactly.

20 Q Has that policy changed over time?

21 A Yes. In the early days, we didn't have a policy
22 set forth. So there was a very, you know, sort of
23 extended processing and engagement with our counsel
24 team on the legal investigation side engaging with our
25 law enforcement and information security counsel team

RODRIGUEZ - DIRECT

458

1 to guide us through how we should be engaging with
2 these types of requests.

3 Q How many warrants has Google objected to because
4 the geographical area was too big as it was listed in
5 the warrant?

6 A I don't know that.

7 Q So Google also requires that the geofence warrant
8 have a defined time frame; right?

9 A Correct.

10 Q And is there a time frame that Google considers to
11 be too long?

12 A No. Again, it would be, you know, based on the
13 context of the warrant itself in conjunction with the
14 actual area of the geofence as well.

15 Q Would you go through that same process that if the
16 warrant comes in, the legal specialist gets it; right?
17 You've got to say yes. I'm sorry. I see that you
18 nodded your head.

19 A That's correct.

20 Q And if the specialist says, eh, I just think this
21 is too long, then they'll go to the lawyers again?

22 A It would be the same process. They may collect
23 information from law enforcement to provide context in
24 their conversations with counsel, and then they would
25 further discuss with counsel what the appropriate

RODRIGUEZ - DIRECT

459

1 action would be.

2 Q So that same back and forth between Google and the
3 law enforcement agent; right?

4 A Correct.

5 THE COURT: That's a yes, right?

6 THE WITNESS: Correct, yes.

7 BY MS. KOENIG:

8 Q And, again, how many warrants has Google objected
9 to because the time frame was too long?

10 A I don't know that.

11 Q Are there geofence warrants that Google considers
12 too sensitive, say, like, politically to comply?

13 A Not as a policy. Again, it would be contextual
14 based on circumstances that are included in the search
15 warrant itself or that we may be aware of because it's
16 a very public sort of circumstance that we are -- you
17 know, know external to Google.

18 Q And so are you aware of any examples where Google
19 has refused to comply because it was too sensitive?

20 A No examples where we've refused to comply, no.

21 Q Is there a policy about that or is that simple the
22 back and forth that we have talked about?

23 A It would be the back and forth. I mean, I think
24 there's not a policy in place, but our specialists
25 know that if there is anything that strikes them as

RODRIGUEZ - DIRECT

460

1 being, you know, needing more information from our
2 counsel team, then they will escalate directly to our
3 counsel team to have that review.

4 Q A fair amount of discretion is initially placed
5 with the specialist that receives the warrant; right?

6 A Correct.

7 Q All right. So once you have the warrant that has
8 the geographical area and the defined time frame, and
9 you have this back and forth, the first thing that you
10 do is you turn over, at the first stage, all of the
11 Location History data points within the geofence to
12 the law enforcement officer; right?

13 A That are within the specified time frame on the
14 warrant.

15 Q And then you wait for the government to come back,
16 and they may ask for additional Location History data
17 points beyond the scope of the initial request?

18 A Right. So it would be Location History data that
19 was outside of the geofence and outside of the initial
20 time frame.

21 Q And that's the second step of the process; right?

22 A Correct.

23 Q And in the second step, can the government ask for
24 all Location History data points no matter the
25 geographical area?

RODRIGUEZ - DIRECT

461

1 A So, it would be limited to devices that were
2 identified by their device ID in the Step 1 of the
3 warrant.

4 Q Okay. Has Google objected to geofence warrants
5 because the geographical area in the second step was
6 too big?

7 A We aren't applying the geographical area
8 constraint to that. So it's really more the time
9 constraint that's applied.

10 Q The geographical area means nothing, really, in
11 the second phase; right?

12 A I mean, it's applicable because it's derived from
13 the Step 1 processing, but in the way that we handle
14 these types of requests, the area at that point is
15 already -- it's already narrowed by the records that
16 were produced in Step 1.

17 Q Sure. But for any device ID that the data is
18 returned in the second stage, there are no
19 geographical limits for that second stage?

20 A To my knowledge, no.

21 Q So that data could come from houses; right?

22 A I'm not sure I understand the question.

23 Q The location data points that are returned in the
24 second stage, it could come from houses, as an
25 example; right?

RODRIGUEZ - DIRECT

462

1 A The phrasing is a little confusing to me. So the
2 location information would come from the device always
3 as reported to us. It could include a path through a
4 house.

5 Q Let me phrase that a little bit better. The data
6 could indicate that the device in the second stage was
7 in a house, for example; right?

8 A Sure. We wouldn't know that at the time, because
9 the legal specialist wouldn't review any of the data,
10 the actual content of the data itself, or plot it on a
11 map. So it could include that.

12 Q That device could be anywhere; right?

13 A Correct.

14 Q A place of worship; right?

15 A Correct.

16 Q Schools; right?

17 A Correct.

18 Q Hospitals?

19 A Any physical location that could have a device
20 within it.

21 Q Okay. In the second step, has Google objected to
22 geofence warrants because the time frame that was
23 expanded in the second step was too long?

24 A Yes. And to qualify, the too long is in relation
25 to what was initially ordered on the warrant. So the

RODRIGUEZ - DIRECT

463

1 warrant may also include, as in this case, specific
2 parameters, so it was plus or minus 30 minutes.

3 So if the law enforcement officer had come back
4 and said "I want an hour on either side of the
5 original time frame," that would not be permitted
6 within the context of this warrant.

7 Q If time frame is listed -- if the expanded time
8 frame is listed in the warrant, are there any times
9 where Google has objected to say that time frame, the
10 expanded time frame in the second stage that's listed
11 in the warrant, is too long?

12 A In the initial warrant, we may have. I haven't
13 been involved directly with any of those types of
14 objections, but we may have.

15 Q Would it follow that same process where the
16 specialist would identify this issue, then bring it to
17 the lawyers?

18 A Correct.

19 Q And then Google would go back to the law
20 enforcement officer?

21 A That's correct.

22 Q And there would be some sort of negotiation
23 between Google and the law enforcement officer?

24 A There would be a conversation. In many
25 circumstances, if there's an issue with the actual

RODRIGUEZ - DIRECT

464

1 wording of the language on the warrant itself, it may
2 be -- we may require law enforcement to obtain an
3 amended or a newly-issued warrant that addresses the
4 issue that we have identified in the warrant text.

5 Q Okay. Thank you.

6 Is there a time limit on when law enforcement must
7 come back to request the additional Location History
8 data in the second step?

9 A Yes. So our system does only retain the records
10 for a certain period of time.

11 Q How long does it retain them for?

12 A Roughly, 60 days.

13 Q So from the time that the Stage 1 data is
14 produced, that data stays wherever you put it for 60
15 days?

16 A Right. It's sort of depending on the actual
17 processing of the warrant. So there's certain events
18 that trigger whether that data is then collected to
19 actually purge. But, roughly, 60 days after the
20 production of the initial stage of the warrant we
21 would be able to then respond to and produce on the
22 follow-up stages to the warrant.

23 Q How does Google determine that 60-day limit?

24 A That's guidance from our legal counsel.

25 Q Okay. And when did Google create that guidance?

RODRIGUEZ - DIRECT

465

1 A It's evolved over time. I don't have a specific
2 date or even month. A lot of the evolution has
3 happened since 2018 through this most recent year.

4 Q Has that guidance changed over time?

5 A Yes. In conjunction with our tooling, which is
6 what determines whether the data is automatically
7 purged at the time, that it would be, you know, 60
8 days or so.

9 Q What do you do if the law enforcement officer
10 comes back and makes the second stage request after
11 the 60-day time frame has past?

12 A We may ask them to submit a new warrant.

13 Q Are there any times where you just go run the data
14 again?

15 A It would be under the close direction of counsel
16 if we were to do sort of a secondary search,
17 basically, which is what that would be for us.

18 Q But that would be at the discretion of Google?

19 A At counsel's discretion.

20 Q Google counsel's discretion; right?

21 A Correct.

22 Q Do you know if Google has objected because law
23 enforcement -- well, you've already answered that
24 question. Never mind.

25 Will Google comply with if the officer comes back

RODRIGUEZ - DIRECT

466

1 in the second stage and asks for additional Location
2 History beyond the scope of the initial request on all
3 of the device IDs from the Stage 1 return?

4 A I'm sorry. Can you say that one more time?

5 Q So, if -- so, Stage 1 -- like in this case --
6 right? -- we have 19 device IDs that are returned;
7 right? You're shaking your head yes.

8 A Yes.

9 Q And in this case, the law enforcement officer
10 Detective Hylton, asked for the Stage 2 information,
11 the expanded data on all 19 devices; right?

12 A Yes.

13 Q And so Google seemed to do something; right?
14 Like, explain to us what Google did in response to
15 that.

16 A So, based on my understanding of the events, one
17 of our specialists who was handling this specific case
18 had reached out to the detective to explain -- the way
19 the language in the warrant reads is that Step 2 is
20 supposed to be narrowed from Step 1. So all 19
21 devices were produced in Step 1. In order to make
22 Step 2 actually useful in identifying devices that
23 were aligned with the facts of the investigation,
24 which Google doesn't know, the law enforcement officer
25 would need to review those and determine which devices

RODRIGUEZ - DIRECT

467

1 were relevant to the investigation and submit a
2 request specific to those devices.

3 Q Okay. So, we'll come back to the specific example
4 in this case, but does that happen in every case that
5 law enforcement comes back from Stage 1 and asks in
6 Stage 2 for expanded data on every device that is
7 listed in Stage 1? Is there always sort of an
8 objection to that by Google?

9 A Not always, no.

10 Q When would it not happen?

11 A If the law enforcement officer had demonstrated a
12 narrowing in their request. So if there were a lower
13 number of devices from Stage 1 to Stage 2, then that
14 would be the only real kind of reflection to Google
15 and to our specialist team that the request from Stage
16 1 had been narrowed in the Stage 2 request.

17 Q So Google requires that there be less device IDs
18 requested or there be data requested on fewer device
19 IDs in Stage 2 than in Stage 1?

20 A I wouldn't say it's necessarily a requirement.
21 It's a signal to us of, you know, following the actual
22 three-stage protocol.

23 Q So are there times, then, where Google has gotten
24 a request from law enforcement, and the law
25 enforcement officer is requesting the expanded data in

RODRIGUEZ - DIRECT

468

1 Stage 2 on all devices listed in Stage 1, presuming
2 there's more than one device -- right? -- and you
3 don't object?

4 A It would likely be a conversation with our counsel
5 team in those circumstances in order to determine if
6 there would be a necessary conversation with law
7 enforcement at that point.

8 Q So that same process. Specialist has a question,
9 goes to legal counsel at Google; right?

10 A Correct.

11 Q Maybe there's a conversation with a law
12 enforcement officer; right?

13 A Correct.

14 Q Okay. If it's -- is there any guidance that
15 Google has about how much narrowing has to happen?

16 A There's guidance from our counsel team, but
17 nothing that's developed as sort of a policy or you
18 must adhere to this in every single circumstance.

19 Q Is the guidance like in a percentage form, like we
20 want 25 percent less devices? I mean, what does the
21 guidance tell you?

22 A Not any sort of percentage form. There is still
23 that discretion that the legal specialist has in being
24 able to apply the policies that counsel has provided
25 to us.

RODRIGUEZ - DIRECT

469

1 Q Do you know how many warrants Google has objected
2 to because the officer requested the expanded data on
3 every device that was listed in Stage 1?

4 A I don't know that.

5 Q All right. So then we get to the third step. And
6 once you turn over the data points in the second step,
7 you wait for the government to come back and ask for
8 the identifying information on the account user for
9 the particular device IDs; right?

10 A Correct.

11 Q So that information, the identifying information,
12 includes an account user's email address?

13 A Correct.

14 Q And it includes, if you have it, a name that's
15 associated with the user account; right?

16 A Yes.

17 Q And is there a time limit on that when law
18 enforcement has to come back and request the third
19 step data?

20 A Right. It would be consistent. Roughly, 60 days.

21 Q Is it 60 days from the time that the second stage
22 is turned over or is it 60 days from the time of Stage
23 1?

24 A From the second stage.

25 Q So to get from Stage 1 to Stage 3 could be a

RODRIGUEZ - DIRECT

470

1 matter of 120 days?

2 A Correct.

3 Q Again, how did you determine that 60-day limit at
4 Google?

5 A That's a counsel determination.

6 Q Has that changed over time?

7 A That's correct.

8 Q That it has changed over time?

9 A Yes.

10 Q How long has the 60 days been in effect?

11 A I don't have a specific date of when that was
12 launched.

13 Q Has it been since 2018?

14 A It's evolved since 2018, but the 60-day sort of
15 determination, I don't have a date for it.

16 Q Okay. If law enforcement makes the third stage
17 request outside of the time limit based on Google's
18 policy, the 60-day policy, what do you do?

19 A So it would be a similar scenario at Stage 2 where
20 we may ask law enforcement to obtain a new warrant in
21 order to produce that information.

22 Q Are there times where you don't necessarily ask
23 them to go back and get a second warrant?

24 A At counsel's discretion, yes.

25 Q Will Google comply if the officer comes back in

RODRIGUEZ - DIRECT

471

1 the third step and asks for the account user
2 information from all of the device IDs listed in Stage
3 2?

4 A I'm sorry. What's the question? Will Google
5 comply with that?

6 Q Yes.

7 A Based on the way that we understand guidance from
8 counsel is that once we've produced Stage 3
9 information, no additional information is to be
10 produced on that warrant.

11 Q I didn't say that very well. I'm sorry. So if
12 you have, you know, you have a number of device IDs
13 that are listed in Stage 2 data, if the law
14 enforcement officer comes back in the Stage 3 request
15 and requests the account user information for all of
16 the device IDs listed in the second stage, will Google
17 comply with that?

18 A Possibly. It depends on the warrant and, you
19 know, sort of the circumstances related to that.

20 Q So, the same back and forth process. The
21 specialist gets the third stage request, does a gut
22 check, goes to counsel; right?

23 A That's right.

24 Q And if counsel thinks it's important, you all will
25 engage in further discussion with the law enforcement

RODRIGUEZ - DIRECT

472

1 officer?

2 A Correct.

3 Q Okay. So let's go back to the specific requests
4 in this case. In this particular case, Detective
5 Hylton submitted the geofence warrant to Google on
6 June 20th of 2019?

7 A Correct.

8 Q And the warrant was dated for June 14, 2019;
9 right?

10 A I believe that's the case.

11 Q You can look at your affidavit, absolutely, or
12 your declaration. That's Defense Exhibit 24.

13 A That's correct, June 14, 2019.

14 Q Thank you. And Google provided the Stage 1 return
15 information on June 28th of 2019?

16 A That's correct.

17 Q And then the Stage 1 return provided Location
18 History information from 19 devices; right?

19 A Correct.

20 Q On July 2, 2019, Detective Hylton emailed Google
21 requesting additional location data beyond the scope
22 of the initial request. So made the second stage
23 request for all 19 devices from the Stage 1 return;
24 right?

25 A That's correct.

RODRIGUEZ - DIRECT

473

1 Q And so July 8 of 2019, Detective Hylton leaves two
2 messages for a Google LIS specialist regarding his
3 earlier Stage 2 requests?

4 A That's correct.

5 Q And the Google employee called Detective Hylton
6 back that same day; right? July 8th?

7 A That's correct.

8 Q And the Google employee had to explain to
9 Detective Hylton the narrowing process; right?

10 A Correct.

11 Q In that the warrant required Detective Hylton to
12 narrow the number of devices he was seeking the
13 expanded information for?

14 A Right.

15 Q They did that -- the specialist did that because
16 Detective Hylton had not narrowed the devices that he
17 was seeking the information for; right?

18 A Correct.

19 MR. SIMON: Judge, I think the
20 characterization of the search warrant would be better
21 and it would be more appropriate for this record if
22 she allowed the witness to, at the very least, see the
23 search warrant, what it reads, and then -- because
24 that is a lot of testifying about -- went outside the
25 scope. I just think it would be good for the witness

RODRIGUEZ - DIRECT

474

1 to look at that.

2 THE COURT: Is it in her declaration?

3 MS. KOENIG: Yes.

4 THE COURT: It's in the declaration, Mr.
5 Simon.

6 MR. SIMON: Understood, Judge.

7 THE COURT: She's already testified to it.
8 So overruled.

9 BY MS. KOENIG:

10 Q So the Google employee had to specifically advise
11 Detective Hylton about the narrowing process because
12 he hadn't narrowed the list; right?

13 A Correct.

14 Q And in this particular case, was there a specific
15 directive that was given to Detective Hylton about how
16 much he had to narrow it from Stage 1 to Stage 2?

17 A Not to my knowledge there weren't any indications
18 from the individual that processed the warrant that
19 that was discussed, but I wasn't involved in the call
20 directly.

21 Q And the Google employee who talked to Detective
22 Hylton also had to advise him about what types of
23 information would be produced in the later stages of
24 the warrant; right?

25 A Correct.

RODRIGUEZ - DIRECT

475

1 Q Okay. It didn't seem to Google maybe that
2 Detective Hylton was familiar with the stages of the
3 process that Google had set forth?

4 A I couldn't characterize what -- that's what my
5 report was thinking at the time.

6 Q Let's now go to Defense Exhibit 1. You can flip
7 to the beginning of Defense Exhibit 1, and I'll put it
8 on the screen for you, as well.

9 THE COURT: So, apparently, Mr. Simon, your
10 objection is sustained.

11 MS. KOENIG: It's getting a little ahead of
12 me, Judge.

13 BY MS. KOENIG:

14 Q All right. So this is a warrant that's dated
15 June 14, 2019, from Detective Hylton. Did you review
16 the geofence warrant in this case before preparing
17 your declaration?

18 A Yes, I did.

19 Q Did the language -- let's skip to the attachments.
20 If you go to the third page of the document, page 3
21 says Attachment 1. And then the fourth page says
22 Attachment 2. It's got a page number at the bottom
23 that says 2, but it is the fourth page of Exhibit 1.

24 So Attachment 2 is the language that describes the
25 three-step process that Google requires in these

RODRIGUEZ - DIRECT

476

1 geofence warrants; right?

2 A That's correct.

3 Q Did this language in this geofence warrant
4 regarding the three-step process that Google designed
5 seem similar to language in other geofence warrants
6 regarding the three-step process?

7 A It appears similar.

8 Q At some point did Google generate a template for
9 law enforcement officers to use in seeking the
10 geofence warrants?

11 A Not to my knowledge. But that was what I was
12 referring to before with the CCIPS sort of engagement
13 in helping to socialize the concept of these types of
14 warrants and the three-step protocol.

15 Q So were you aware of any guidance that Google
16 helped create with CCIPS to give to law enforcement
17 officers about how to seek these warrants?

18 A I'm not aware of the crafting of any guidance,
19 just the sort of discussions or engagement.

20 Q Okay. So let's go back to the first stage of the
21 process.

22 MS. KOENIG: Actually, just a moment, Judge.

23 BY MS. KOENIG:

24 Q Okay. So sometimes there have been times when
25 Google has notified users that their Location History

RODRIGUEZ - DIRECT

477

1 was swept up in a geofence search; right?

2 A Correct.

3 Q Do the LIS specialists -- do you all issue that
4 notification?

5 A That's correct.

6 Q How does that happen?

7 A Do you want me to describe the process?

8 Q I do, yes.

9 A So, in reviewing the search warrant, we will look
10 for the appropriate nondisclosure order within the
11 warrant. If none exists, we may engage with law
12 enforcement to let them know that our process is to
13 notify users before disclosing data.

14 The process is somewhat different in reverse
15 Location History because we don't know the users that
16 we would notify until the third stage. So at that
17 point in time in the processing of a reverse Location
18 History warrant, we would --

19 THE COURT: A reverse Location History
20 warrant.

21 THE WITNESS: Sorry about that. I'll try to
22 be a little slower.

23 A So in the processing of a reverse Location History
24 warrant at Stage 3 where the user would be
25 de-anonymized, we would actually disclosure the

RODRIGUEZ - DIRECT

478

1 subscriber information for that Google account prior
2 to that production if there is not a nondisclosure
3 order and a law enforcement agent has indicated that
4 they have no objection to Google notifying the users.
5 In this circumstance, our team would prepare a
6 standard form email to send to the users that we would
7 then be disclosing the information related to their
8 account.

9 Q Okay. I'm going to break that down, because that
10 was a little -- there are several stages of that
11 process. So, first, you talked about if the warrant
12 has a nondisclosure order, what do you mean by that?

13 A It's possible there's one in this warrant.

14 Q You can take your time and look at it.

15 A So I'm not seeing the language just in sort of a
16 cursory review here. Within the warrant, there would
17 typically be an order from the judge indicating that
18 Google is not to disclose to any users associated with
19 the investigation or legal process.

20 It could also be a secondary legal order from the
21 warrant itself that's specific to the same order from
22 the Court that Google not notify the users related to
23 this legal process.

24 Q But you don't see that nondisclosure order in this
25 warrant at all?

RODRIGUEZ - DIRECT

479

1 A Not in this that I have in front of me. Let me
2 just double check.

3 Q Sure. Take your time.

4 MR. SIMON: Judge, I can clarify. I think
5 the -- so, in part, and this will be subject to
6 Detective Hylton talking about it, there was a
7 nondisclosure order that was gotten later in the
8 process. And I recognize now that we didn't provide
9 the nondisclosure order. And I'm happy to do that,
10 but that's why it wasn't attached here. It's gotten
11 at a separate time because those have to go through a
12 circuit judge is my understanding. So that's, in
13 part, why there was a delay.

14 So I'll just note it's not attached to the
15 search warrant.

16 THE COURT: Well, it might be important to
17 this examination. Is there a way to get a copy of it?

18 MR. SIMON: Sure. I think we can figure out
19 that pretty quickly, Judge.

20 MS. KOENIG: How quickly because I'm almost
21 done?

22 THE COURT: How quickly because she's almost
23 done?

24 MR. SIMON: Judge, not at this precise
25 moment. I can represent to the Court that it wasn't

RODRIGUEZ - DIRECT

480

1 something that, in my mind, was really sort of going
2 to the heart of what we were discussing here, and
3 never really crossed my mind as something we needed to
4 turn over. But it also wasn't given to me. So I
5 haven't withheld it. He's mentioned it to me, and
6 it's just my mistake for not getting it and handing it
7 over. But I will represent we have a nondisclosure
8 order. We'll provide it to them and do that.

9 THE COURT: Well, do you have a sense of how
10 long it was? Was it a day? A couple hours? A week?

11 DETECTIVE HYLTON: Your Honor, it would have
12 been the day that it was actually submitted to Google.
13 I believe it was June 20.

14 THE COURT: Well, how do you want to proceed,
15 Ms. Koenig?

16 MS. KOENIG: I will let them produce it, and
17 we'll talk about it with Detective Hylton, I think.

18 THE COURT: Okay.

19 BY MS. KOENIG:

20 Q When there is a notification -- if there isn't a
21 nondisclosure order, then what was the next phase?
22 Like, what happens? So you wait until the warrant
23 gets to Stage 3, and then you notify all of the users
24 whose information is about to be turned over in Stage
25 3?

RODRIGUEZ - DIRECT

481

1 A Right. So, the first step at Stage 3 is
2 evaluating if that nondisclosure order was submitted
3 prior to our processing of that Stage 3 request. If
4 we don't have a nondisclosure order, we do engage with
5 the law enforcement officer, again, in a form email to
6 notify them that, you know, if you are to obtain a
7 nondisclosure order, you may submit it to us, but we
8 won't be able to produce subscriber information at
9 Stage 3 until you provide us with that nondisclosure
10 order or you let us know that you have no objection to
11 Google notifying the user.

12 So that process happens first. If we receive
13 information that the law enforcement officer has no
14 objection to Google notifying, then we will move on to
15 actually notifying the users that we would be
16 producing their subscriber information in Step 3.

17 So just those users that were requested by the law
18 enforcement officer at Stage 3.

19 Q Okay. What does the notice tell the individual
20 whose information is about to be turned over?

21 A It lets them know that we received legal process
22 associated with their account. Typically provides
23 them seven days to provide us with a court-stamped
24 copy of a motion to quash, intending to, you know,
25 sort of engage within the court system on the search

RODRIGUEZ - DIRECT

482

1 warrant itself. And we will, therefore, hold
2 production of that subscriber information until
3 they -- either the law enforcement officer agent or
4 the lawyer representing the attorney lets Google know
5 that the motion has been either approved or denied.

6 Q So in every case where geofence warrant is
7 obtained, you will follow that process unless there's
8 a valid nondisclosure order?

9 A Correct.

10 Q Is there any language that you need specifically
11 in the nondisclosure order to consider it valid?

12 A Basically, there has to be a clear order from the
13 Court that Google is not to notify in regards to this
14 legal process, notify our users in regards to this
15 legal process.

16 Q When you say "clear order," is that subject to
17 that same kind of back and forth where Google will
18 review it and decide what they think is clear or not?

19 A It can be. Only -- and it would be with our legal
20 counsel depending -- so if it's within the warrant
21 itself, in some cases we may receive the affidavit,
22 and the affidavit may include a statement from the law
23 enforcement agent indicating basically the statement
24 to the judge asking for a nondisclosure order. And in
25 that circumstance, it's not very clear to Google

RODRIGUEZ - DIRECT

483

1 whether the judge was also, you know, sort of so
2 ordering that request from the agent.

3 So in those circumstances, there will be that sort
4 of coordination with our legal counsel to review and
5 determine what the next steps would be.

6 Q And next steps could include going back to the law
7 enforcement agent; right?

8 A Correct.

9 MS. KOENIG: Okay. I have no further
10 questions, Your Honor. Thank you.

11 THE COURT: I have a question, and I'm going
12 to let you stand there so that -- well, actually, I'll
13 let you address it on whatever it is.

14 MS. KOENIG: Redirect.

15 THE COURT: Redirect.

16 MS. KOENIG: Thank you, Your Honor.

17 THE COURT: It's odd under the law because
18 you're an adverse witness, normally it's direct.

19 MS. KOENIG: Your Honor, I will -- I have one
20 more thing. Mr. Gill had provided me a possible
21 explanation of the acronym.

22 BY MS. KOENIG:

23 Q Does CCIPS -- does it sound -- is your
24 recollection that it may stand for Computer Crimes and
25 Intellectual Property Section?

RODRIGUEZ - DIRECT

484

1 A Sounds accurate.

2 Q Okay.

3 MS. KOENIG: Thank you.

4 THE COURT: All right. So, Ms. Rodriguez, do
5 you have any sense of what you, as a Google employee,
6 or what Google would consider realtime information?
7 We're hearing testimony about, you know, getting Maps
8 information in realtime. Do you have any
9 understanding of what realtime means?

10 THE WITNESS: In this context -- or I guess
11 in the Maps context, no. In my context as a legal
12 specialist, realtime would, for the most part, mean a
13 Title III, like a wiretap or a pen register trap and
14 trace order that my team also processes. But in the
15 context of Location History, we don't have that
16 concept. We don't have the capability of installing
17 sort of a realtime kind of tracking process for
18 Location History data.

19 THE COURT: So the difference I hear you
20 saying, and correct me if I'm wrong, is that realtime
21 is sort of as it's ongoing. It's not historic.

22 THE WITNESS: Correct. In the context of how
23 I have been trained and engage with this material,
24 that's my understanding of what realtime would mean
25 for the legal investigations team.

RODRIGUEZ - CROSS

485

1 THE COURT: So within, say, you know, an hour
2 period -- I don't know. I don't want to go outside
3 our record, but if there were over 50 points, so just
4 under one per minute, that would not be considered
5 realtime; is that right? I know it's all different
6 time. So I'm not trying to put words in your mouth.
7 So answer as you see fit.

8 THE WITNESS: Right. From my perspective,
9 all the records that we produce in response to reverse
10 Location History warrants are stored. So it would not
11 be realtime in the context that I understand realtime.

12 THE COURT: Okay. That's my question.

13 THE WITNESS: Thank you.

14 CROSS-EXAMINATION

15 BY MR. SIMON:

16 Q Good afternoon, Ms. Rodriguez.

17 A Good afternoon.

18 Q The discussions with the Computer Crimes and
19 Intellectual Property Section that have been
20 mentioned, those are discussions between, I presume,
21 Google's lawyers and the folks from CCIPS; right?

22 A Correct.

23 Q And as far as you're concerned, those are sort of
24 the -- that's the back and forth that you mentioned,
25 primarily?

RODRIGUEZ - CROSS

486

1 A Correct. I have no direct involvement in that.
2 Just awareness of, you know, sort of the fact that
3 discussions are happening at that level.

4 Q Okay. And I know that it's already been admitted
5 by the defense, but I'll ask you, there's a smaller
6 book in front of you, a binder. And I'll show you
7 what's marked as Government's Exhibit 3A.

8 A Okay.

9 Q Do you recognize that as your declaration? I'll
10 give you a second to look at the pages there.

11 A Yes, it would appear to be.

12 MR. SIMON: Judge, I'd move to admit
13 Government's Exhibit 3A.

14 THE COURT: No objection, right?

15 MS. KOENIG: It's already been admitted, Your
16 Honor. It was admitted --

17 MR. DUFFEY: As a defense exhibit.

18 MS. KOENIG: But I have no objection.

19 THE COURT: No objection. Yes.

20 (Government's Exhibit No. 3A is admitted into
21 evidence.)

22 BY MR. SIMON:

23 Q When we talk about the geofence warrant, I'm just
24 going to sort of go through some of the points that
25 you've made in your declaration. And to the extent

RODRIGUEZ - CROSS

487

1 you want to clarify them, feel free.

2 But the geofence warrant calls for the anonymized,
3 deidentified location coordinates for folks who fall
4 within a certain radius. So for a defined geographic
5 area during a defined time frame; right?

6 A That's correct.

7 Q And at the time the focus is the unidentified
8 suspect of that alleged crime; right?

9 A From law enforcement's perspective?

10 Q Correct.

11 A To the extent that they indicate that to us, that
12 would be our understanding.

13 Q Understood. And when processing geofence
14 warrants, you've said you've seen sort of the period
15 between a few minutes and a few hours?

16 A Correct.

17 Q Okay. And the -- that time span's limited to that
18 geographic area until the second stage when you get
19 what you've referred to as contextual -- or will get
20 contextual Location History information?

21 A Correct.

22 Q And I will show you what's in front of you as
23 Government's Exhibit 2.

24 MR. SIMON: And it's not been admitted,
25 Judge, but I'll ask to question from it subject to

RODRIGUEZ - CROSS

488

1 connection --

2 THE COURT: I'm sorry. I'm having trouble.

3 MR. SIMON: I'll ask for it to be admitted
4 subject to connection to our witness's testimony that
5 this is the warrant. This is Government's Exhibit 2.

6 THE COURT: All right.

7 MR. SIMON: I'm going to question from it.
8 Can we bring it up?

9 BY MR. SIMON:

10 Q If we look at what's -- there's red page numbering
11 on Government's Exhibit 2. If you look at page 4 with
12 the red numbering as the guide, I want to highlight
13 the second full paragraph, not "for each type," but
14 starting "law enforcement officers."

15 A Yes.

16 Q The paragraph that says "law enforcement officers
17 will return a list." I think it's the next one. I'm
18 sorry.

19 Now, it's your understanding -- right? -- that
20 this is the second stage after you all have returned
21 the first stage of deidentified devices within the
22 geographical area?

23 A Correct. This would be the second stage.

24 Q And in looking at -- I'm sorry. It was the second
25 paragraph that was already highlighted. I'm just

RODRIGUEZ - CROSS

489

1 jumping around a little bit.

2 You would agree with me that in the second
3 paragraph, it reads that law enforcement officers will
4 review that first stage; right?

5 A Correct.

6 Q And will in an effort to narrow down the list of
7 accounts; right?

8 A Correct.

9 Q And law enforcement officers, it reads in the next
10 sentence, will attempt to narrow the list down by
11 reviewing the time stamped location coordinates for
12 each account and comparing against the time -- the
13 known time and location information that is specific
14 to the crime; right?

15 A Correct.

16 Q Now, you mentioned on direct -- and we can just
17 leave that up. You mentioned on direct the number of
18 geofence warrants -- geofence requests. About 9,000
19 in 2019?

20 A Right. It was around that volume.

21 Q And when you have the warrants, it's your
22 understanding that a judge has determined that there
23 is probable cause for this information; right?

24 A That's my understanding.

25 Q And to the extent that there is going to be any

RODRIGUEZ - CROSS

490

1 dispute, it's either going to be Google deciding to
2 quash that or seeking to quash that search warrant;
3 right?

4 A If there's a dispute as to the validity of the
5 warrant?

6 Q Yes.

7 A Google would object to processing that warrant if
8 there were a dispute as to its validity.

9 Q Then if, like in this instance, you comply with
10 the warrant as mandated by a judge, then a defendant
11 who is arrested in relation to that warrant can seek
12 to dispute its propriety; right?

13 A I'm not familiar with the steps that would
14 typically come once Google produces the data.

15 Q Understood. And how many sort of different places
16 have signed off on these warrants in your experience?
17 Has it been limited to certain districts, certain
18 states, or is it broad?

19 A So, we've received from many agencies within the
20 domestic United States.

21 Q When you say "many agencies," you mean from many
22 agencies, you've received warrants signed off by
23 judges?

24 A Correct.

25 Q Or magistrates?

RODRIGUEZ - CROSS

491

1 A Correct.

2 Q In the case of responding to this warrant, I just
3 want to be clear for the record's sake with you, as
4 well as I was talking with Mr. McGriff. The first
5 stage just calls on Google to give us the anonymized,
6 deidentified location coordinates for devices that
7 were within that radius at that specified time; right?

8 A Devices that had reported location coordinates
9 within the geofence.

10 Q Okay. And then Google determines, based on the
11 location information that they have, what is
12 responsive to the warrant; right?

13 A We would search our system, our Location History
14 storage system, in order to determine what's
15 responsive to the warrant.

16 Q And we had some discussion about that storage
17 system earlier, but would you agree that it's possible
18 for Google to work within that storage system to index
19 sort of device information according to where the
20 latitude and longitude comes back from?

21 A I'm not sure I understand the question.

22 Q Okay. So I think it's in part because I think the
23 concept is a bit foreign to me, too. But this notion
24 of the warrant comes back. Google then responds to
25 the first stage. And by doing that, Google enters the

RODRIGUEZ - CROSS

492

1 location coordinates to find out which device IDs were
2 present; right?

3 A So, for -- so processing Stage 1, we would enter
4 in the coordinates, the geofence coordinates that were
5 provided on the warrant and the time frame, and that
6 conducts a search across all of our Location History
7 in order to identify the actual responsive location
8 coordinates that are stored at the user level. So
9 that would -- I'm not sure if that answers your
10 question.

11 Q Sure. I think that just the follow-up would be
12 that Google could then sort of -- they could work
13 around the way in which they save that Location
14 History information; right? So I could -- I'm
15 positing that I could save the location information to
16 account for users that were in a certain period at a
17 certain time, even before the government comes back
18 and requests that information; right?

19 A At Stage 2?

20 Q I'm just talking generally about the Location
21 History information database, the Sensorvault. That
22 you all could take the information that is stored in
23 there and determine that we're only going to store --
24 store based off of a certain grid, a location
25 coordinate grid; right? To say that we'll only put

RODRIGUEZ - CROSS

493

1 these devices that were here at this time here.

2 A I think this might be a little bit outside of my
3 domain of knowledge.

4 THE COURT: I'm going to be honest,
5 Mr. Simon. I found that a little confusing.

6 MR. SIMON: Understood, Judge. And I think
7 that ultimately Mr. McGriff was probably our best
8 understanding of that issue.

9 BY MR. SIMON:

10 Q With respect to the second step, your declaration
11 recognizes that the information that is provided at
12 Step 2 of the warrant is more than just about sort of
13 picking out a suspect; right?

14 A So the information provided at Step 2, I think
15 this warrant might sort of outline maybe what law
16 enforcement is looking for in terms of comparing the
17 information against the known kind of facts of the
18 case that they're investigating.

19 Q And I think that sort of brings to the point about
20 sort of the facts of the case.

21 When the search warrant is submitted to Google
22 through the enforcement database, you only get the
23 attachment that shows the process by which to complete
24 the warrant; right? That's one piece that you get.

25 A That Google receives?

RODRIGUEZ - CROSS

494

1 Q Yes.

2 A Correct. We receive the legal process as uploaded
3 by the law enforcement agent to the LER system.

4 Q And you don't receive the affidavit that the law
5 enforcement officer submits to the judge?

6 A It varies. In some circumstances, the law
7 enforcement agent may also include the affidavit. In
8 some cases, they do not. And it also varies whether
9 it's a requirement to submit the affidavit along with
10 the search warrant.

11 Q Google didn't receive the affidavit in this case,
12 did it?

13 A I didn't recall.

14 Q Okay. When talking about the information at the
15 second step, you note in your declaration that you can
16 do a number of things with contextual information at
17 the second step; right?

18 A Do a number of things --

19 Q So, in looking at paragraph 10, in particular, you
20 note that you can -- that using that contextual
21 Location History information at the second stage can
22 allow law enforcement to -- it can assist in
23 eliminating false positives and assist in determining
24 if devices were just moving through possibly?

25 A Correct. In paragraph 11, mentioning the, you

RODRIGUEZ - CROSS

495

1 know, law enforcement in eliminating devices that were
2 not in the target location for a long enough period of
3 time.

4 Q And at the same time also can sort of assess --
5 determine whether a certain ID is relevant or not
6 relevant; right?

7 A Correct.

8 Q So that's just sort of the broader process of
9 determining how to investigate a case. And that will
10 be contingent upon what facts are relevant to a
11 particular crime; right?

12 A Right. And Google wouldn't necessarily have any
13 visibility into the actual facts of the investigation.

14 Q Understood.

15 THE COURT: I'm just going to be clear. That
16 was Defense Exhibit 3A?

17 MR. SIMON: I apologies. That was 3A. I
18 probably am referring to them all as 3.

19 THE COURT: No, I'm not sure there was a
20 number on the record. That's fine.

21 BY MR. SIMON:

22 Q And we've had emails in this case. I don't know
23 if you've had a chance to see those emails. Have you
24 seen the emails between Detective Hylton and Google
25 law enforcement?

RODRIGUEZ - CROSS

496

1 A I reviewed the materials associated with the
2 processing of the warrant when I wrote my declaration,
3 but I haven't seen anything since.

4 Q Okay. So when you're asked about the amount of
5 communication between Detective Hylton and Google,
6 you're not directly familiar, but maybe talking to
7 other folks about it?

8 A Reviewing what we have associated with the
9 processing of the warrant, but -- and in conversation
10 with the individual that processed the warrant
11 directly.

12 Q Would it surprise you if I told you that after the
13 July 1 email and the July 2 email for the second stage
14 that Detective Hylton had not heard back from Google
15 yet?

16 A It wouldn't surprise me.

17 Q Would it surprise you if I told you that Detective
18 Hylton was the one who actually initiated a call with
19 Google on July 8?

20 A That they spoke to someone after calling Google?

21 Q Correct. That Detective Hylton was the one who
22 reached out to Google on July 8.

23 A I do recall that there was a voicemail left for, I
24 believe, one of our counsel team members.

25 Q So the representation that there was any

RODRIGUEZ - CROSS

497

1 information being sent from Google to Detective Hylton
2 prior to July 8, his call on July 8, that's not
3 correct; right?

4 A Well, I believe the Stage 1 was produced.

5 Q Sorry. I should rephrase that. There were not
6 any communications from July 1 through July 8 on the
7 side of Google until Detective Hylton called; right?

8 A Right. As far as I'm aware, there was no
9 conversation until that July 8 with an actual Google
10 representative.

11 Q And you would agree that with respect to making
12 sense of these geofence warrants, it is important to
13 know all the facts of the case; right?

14 A It's helpful in many circumstances.

15 Q So when we talk about things like relevance to an
16 investigation, knowing all of the facts in terms of
17 what you have, whether it be starting with sort of
18 whether the culprit appeared to be talking to other
19 people, that would be relevant; right?

20 A In the context of this warrant, I'm not sure how
21 relevant it would have been. But in my processing of
22 other warrants, it has been helpful to have an
23 understanding of the facts of the case that law
24 enforcement has.

25 Q And I just mean it, to be clear, I mean it from

RODRIGUEZ - CROSS

498

1 the context of law enforcement looking at these
2 warrants trying to make sense of what information is
3 useful. All those facts are critical to making that
4 determination; right?

5 A For law enforcement?

6 Q Correct. To determine what to request at Stage 2
7 of this warrant.

8 A I would imagine so, that that would be helpful for
9 them to know.

10 MR. SIMON: One moment, Judge.

11 Judge, I have been told how to ask that
12 question about indexing. So I'm going to try it once
13 more, if you don't mind.

14 BY MR. SIMON:

15 Q Could Google, to your understanding, index the
16 Location History in the Sensorvault by geographical
17 location instead of by account?

18 A I honestly don't know. I could guess that it was
19 technically possible, but I don't know what other
20 limitations may be at play because I don't monitor the
21 database or the structure of the database directly.

22 Q Understood.

23 THE COURT: Thank you, Mr. Simon.

24 Ms. Koenig.

25 MS. KOENIG: Sorry, Ms. Hancock. I will need

RODRIGUEZ - REDIRECT

499

1 one more assist with the --

2 THE CLERK: You should be good to go.

3 MS. KOENIG: Okay. Great.

4

5 REDIRECT EXAMINATION.

6 BY MS. KOENIG:

7 Q All right. Just a few more questions, Ms.

8 Rodriguez.

9 Let's -- so, Mr. Simon was asking you about what
10 attachments would have been submitted to Google, I
11 think, and I think we can clarify this.

12 So, as we know, Google requires that there has to
13 be a defined geographical area -- right? -- before
14 they'll process the warrant?

15 A Correct.

16 Q And there also has to be a defined time frame;
17 right?

18 A Correct.

19 Q Okay. So if you can go back to Defense Exhibit 1
20 -- I know we're switching back and forth with
21 different numbers for the same exhibits. It's
22 confusing.

23 So if you look at the first page of Defense
24 Exhibit 1, which at the top says "Affidavit for Search
25 Warrant." In that affidavit, in paragraph 28, that

RODRIGUEZ - REDIRECT

500

1 appears to list out the geographical area; right?

2 This is page 1 of that exhibit. I'm sorry. I see you
3 flipping back through.

4 A I don't think I have -- so this starts with
5 Attachment 1 as page 1. And I don't -- in Exhibit 1.

6 Q Okay. Let me show you what's on the screen.

7 There may have been a page that got flipped around.

8 THE COURT: It's farther back in Exhibit 1.

9 MS. KOENIG: Thank you, Your Honor.

10 THE COURT: It's a little bit out of order, I
11 think.

12 THE WITNESS: I can look at the screen.

13 THE COURT: It's the last page in Exhibit 1.

14 A I think this ends with search warrant inventory in
15 return, and then it goes back to Attachment 1.

16 Q I am so sorry about that. Well, let's look at the
17 screen. Let's look at the page in Exhibit 1 which is
18 labeled "search warrant" at the top.

19 A Okay. I do have that.

20 Q Okay. So, in that page, nowhere on that page does
21 it indicate what is the time frame or the geographical
22 area to be searched; right?

23 A That's correct.

24 Q In fact, it says "see attached"; right?

25 A Correct.

RODRIGUEZ - REDIRECT

501

1 Q Okay. And so following that, we see what's the
2 next page after that. We see what's labeled as
3 "search inventory and return"; right? I'm not
4 indicating you all would have seen that.

5 A Correct.

6 Q And then there is the Attachment 1 after that;
7 right?

8 A Correct.

9 Q And the Attachment 1 that follows the search
10 warrant itself appears to be identical to Attachment 2
11 in the same exhibit that is attached to the affidavit
12 in support of the application?

13 A In the -- what you had shown on the screen before,
14 that representation, that would appear to be the case.

15 Q In Attachment 1 here, as it is attached to the
16 search warrant, that is the document that indicates
17 the date and the time in the first bullet point;
18 right?

19 A That's correct.

20 Q And then on the second page of that, it indicates
21 in the geographical area above the picture with the
22 circle of the geofence what geographical area is to be
23 searched; right?

24 A That's correct.

25 Q And the paragraphs between those two items discuss

RODRIGUEZ - REDIRECT

502

1 the process, the three-step process that we've already
2 talked about; right?

3 A That's correct.

4 Q And so if all that had been submitted to Google
5 was the page that lists -- that at the top says
6 "search warrant" -- right? -- if that was all that had
7 been submitted, there was no way you would have
8 processed that; right?

9 A Right. If there weren't -- if it said "see
10 attached," but there weren't any corresponding
11 attachments, then that's correct, we wouldn't be able
12 to process this warrant as is.

13 Q And if the cover page didn't indicate the
14 geographical area or the time frame; right?

15 A Correct. If this warrant -- as it currently looks
16 on the screen right now and in the exhibits, if that's
17 all that there was, then Google wouldn't have enough
18 information to process the warrant.

19 Q Thank you.

20 When you are processing a warrant, does it matter
21 to Google if it's a judge that issues the geofence
22 warrant versus a person who is a magistrate that's not
23 a lawyer?

24 A It varies by jurisdiction, as I understand it in
25 my training on the legal investigations team. So we

RODRIGUEZ - REDIRECT

503

1 may accept search warrants signed by magistrates and
2 we would accept search warrants signed by a judge.

3 Q And so the training -- or you would accept it from
4 a jurisdiction that allows magistrates to issue such
5 warrants; right?

6 A Correct.

7 Q And speaking of your training, when we talked
8 about that back and forth process between Google and
9 the law enforcement agent on the different stages of
10 the process, do you all, as LIS employees, do you get
11 training on how to handle those types of issues about
12 when you need to go to legal counsel?

13 A Correct. We get training. We also have a regular
14 sort of engagement, you know, scheduled on a weekly
15 basis with our law enforcement counsel.

16 Q And Mr. Simon had asked you about the Stage 1
17 process, and you had replied that all users have to be
18 searched. And we've been talking about numerous tens
19 of millions. Do you have any idea how many millions
20 we're talking about in terms of what the Stage 1
21 search is of?

22 A I don't.

23 MS. KOENIG: Okay. No further questions,
24 Your Honor. Thank you.

25 From the defense perspective, she can be

RODRIGUEZ - REDIRECT

504

1 excused from her subpoena, Your Honor.

2 MR. SIMON: And from the United States, as
3 well, Judge.

4 THE COURT: All right. Well, Ms. Rodriguez,
5 I want to thank you for coming here and for
6 testifying. You are excused. Until we're done with
7 the proceeding, I would continue to consider you under
8 sequestration. Just don't talk to folks about what
9 you've testified to, even though you're not subject to
10 recall. And you probably could. It just keeps the
11 record cleaner, if you're willing to keep things
12 close. We do appreciate your coming.

13 THE WITNESS: Understood.

14 THE COURT: And you are excused.

15 THE WITNESS: Thank you. Do you want me to
16 sanitize this?

17 THE COURT: If you don't mind, sir, could you
18 clean it off afterward?

19 MR. MELTON: Yes, Your Honor.

20 THE COURT: You're good. Thank you.

21 THE WITNESS: Thank you.

22 (The witness was excused from the witness
23 stand.)

24 THE COURT: In fact, since we're calling a
25 new witness, and it's been almost an hour and a half,

1 how about we take a 15-minute recess. And so that
2 will be until 3:35. How's that?

3 MS. KOENIG: Your Honor, the defense has no
4 other witnesses to present at this stage. And I think
5 we will be ready for the next government witness.

6 THE COURT: All right. Well, that's good to
7 know. Even more reason to take a break. See you in
8 15 minutes.

9 (Recess at 3:20 p.m. to 3:44 p.m.)

10 THE COURT: All right. I understand we
11 talked about some logistics, which is why we're coming
12 back a little late. Do you all have a sense of how
13 much longer we will be going? Can we finish today?

14 MR. SIMON: Judge, I don't intend to -- and I
15 certainly am happy to keep an eye on the clock, but I
16 don't intend for the direct to be more than 45 minutes
17 or so. I think a lot of it is contingent upon cross
18 in both instances. But there are a handful of topics
19 to cover with each witness.

20 THE COURT: Right. So 45 minutes each?

21 MR. SIMON: I think so, Judge.

22 THE COURT: What do you all think? I'm
23 willing to stay late. Otherwise, I would think it
24 would make sense to bring the second witness in on
25 Monday. We can't go tomorrow because all the

D'ERRICO - DIRECT

506

1 electricity is shut down.

2 MS. KOENIG: We would prefer to get it done
3 today, if at all possible.

4 THE COURT: Well, I think if both parties are
5 willing to stay a little late, and I apologize to the
6 inconvenience for the marshals and everybody else. I
7 just think the better part of valor would be to
8 finish. And so I will encourage you all to be
9 efficient while, of course, representing your clients
10 with zeal. So we're ready.

11 MR. SIMON: Judge, we'd call Special Agent
12 Jeremy D'Errico.

13

14 JEREMY D'ERRICO, called by the United States,
15 first being duly sworn, testified as follows:

16

17 DIRECT EXAMINATION

18 BY MR. SIMON:

19 Q All right. Special Agent D'Errico, can you spell
20 your name for the court reporter, please.

21 A Yes. My first name is Jeremy, J-E-R-E-M-Y. My
22 last name is D'Errico, D-apostrophe-capital
23 E-R-R-I-C-O.

24 Q And you are with the Federal Bureau of
25 Investigation; right?

D'ERRICO - DIRECT

507

1 A Yes, I am. I'm a special agent with the FBI.

2 Q And how long have you been there?

3 A I've been with the FBI since 2012.

4 Q Okay. In what role are you currently in there?

5 A Currently, I'm a special agent. Prior to being a
6 special agent with the FBI, I was a computer scientist
7 with the FBI.

8 Q And do you have any specialized role there with
9 the FBI?

10 A I do. I'm part of the cellular analysis survey
11 team. We abbreviate it as CAST. It's a team that is
12 specially trained of about 80 special agents and task
13 force officers stationed across the country
14 specifically trained to conduct historical cell-site
15 analysis.

16 Q Okay. What other positions have you held while
17 you've been with the FBI?

18 A When I first became a special agent with the FBI,
19 I was on the cyber squad investigating computer
20 intrusions and other highly technology investigations.
21 Currently, I'm on the violent crime squad where I
22 brought my technology expertise to help use advanced
23 technology in the investigations of violent crime.

24 Q And in your work with the CAST team, do you
25 undergo any certifications or trainings?

D'ERRICO - DIRECT

508

1 A Yes. As part of the CAST team, we have over -- or
2 I have more than 300 hours of training to be able to
3 certify for the team. And that starts with a basic
4 training, an overview of how to conduct historical
5 cell-site analysis. And then from there, the top
6 students move on to the next class, which is an
7 advanced class in historical cell-site analysis.

8 From there, the top students, again, get invited
9 to what we call a field training exercise, which is
10 where we discuss more advanced topics as well as add
11 time constraints to our work simulating a command post
12 situation for, say, a fugitive or a child abduction.

13 From there, again, the top students move into a
14 four-week certification phase where we go through
15 training from the FBI from the cellular carriers,
16 including AT&T, Verizon, Sprint, T-Mobile, and U.S.
17 Cellular, as well as over a week of instruction from
18 the Florida Institute of Technology on how radio
19 frequencies work, and additional practical exercises.
20 And that culminates with a practical exam, which we
21 need to pass in order to complete the certification.

22 Q All right. Now, as a member of the CAST team, are
23 you called on to assess GPS data points provided by
24 cellular companies and other technology companies?

25 A Yes, I am.

D'ERRICO - DIRECT

509

1 Q Okay. And same with Wi-Fi points?

2 A Yes, correct. Generally, any type of location
3 points.

4 Q Okay. And in the course of your time, have you
5 done that with -- done that assessment with Google
6 location information?

7 A Yes, I have. I've reviewed over a million lines
8 of Google Location History, whether it be from a
9 geofence or a location history attributed to someone's
10 accounts, as well as conducted what I call
11 observations of Google Location History data in play.

12 Q Have you personally attempted to assess the
13 accuracy of Google location coordinates?

14 A Yes, I have. I've taken out equipment several
15 times to drive around, record my actual GPS location
16 with a stand alone device. And then on another
17 device, I've collected all of the Wi-Fi access signals
18 that I could hear, as well as the signal strengths,
19 and I used Google's geolocation API, which takes the
20 information from the Wi-Fi access points and returns
21 to me a location, a latitude and a longitude and a
22 point on the map, as well as a display map radius,
23 just as they do with Location Accuracy on the Google
24 devices.

25 THE COURT: What's a geolocation API?

D'ERRICO - DIRECT

510

1 THE WITNESS: Geolocation API, API stands for
2 Application Programmer Interface, and it is a way for
3 me to send information to Google, Google to process
4 it, and send me a response.

5 So I send them the information, and then
6 evaluate the response back. I compare their location
7 that they provided and their maps display radius that
8 I measured with an independent device.

9 Q Now, have you ever successfully located anyone
10 using Google location information?

11 A Yes, I have.

12 Q Can you tell us about that?

13 A This is information that myself and the CAST team
14 regularly uses in child abductions, in locating
15 fugitives that do not want to be found by law
16 enforcement, and other folks that may have gone
17 missing.

18 Q Have you been certified as an expert before?

19 A Yes, I have.

20 Q In what fields have you been certified?

21 A Historical cell-site analysis and location data
22 analysis is generally the title we use.

23 MR. SIMON: Judge, at this point I'd move the
24 Court to declare Special Agent D'Errico an expert in
25 the field of location, data analysis, including

D'ERRICO - DIRECT

511

1 Google's Location History information.

2 THE COURT: Any objection?

3 MR. SIMON: No, Your Honor.

4 THE COURT: Okay.

5 MR. SIMON: And, Judge, I've handed the
6 exhibit earlier -- the witness the exhibit earlier, as
7 well as defense, Government's Exhibit 6. It's Special
8 Agent D'Errico's C.V., and I move to admit it at this
9 time.

10 THE COURT: Any objection?

11 MR. SIMON: No, Your Honor.

12 THE COURT: All right. It will be admitted
13 as well, and he is certified as an expert.

14 (Government's Exhibit No. 6 is admitted into
15 evidence.)

16 BY MR. SIMON:

17 Q Now, Special Agent D'Errico, have you worked with
18 geofence warrants before?

19 A Yes, I have.

20 Q About how many have you worked with?

21 A Geofence warrants, at least a dozen, probably
22 more.

23 Q Okay. Now, did Google provide any data under this
24 geofence warrant any different than what they provided
25 to you in the past?

D'ERRICO - DIRECT

512

1 A The records have been consistent with this among
2 the other geofence warrants I have worked.

3 Q Now, just to -- we've talked about geofence
4 warrants, obviously, for a few days now, but how would
5 you describe a geofence warrant?

6 A A geofence warrant is when the government obtains
7 a search warrant commanding Google to provide all of
8 the devices that have Location History records within
9 a particular area and within a particular time frame.

10 Q And in the course of your time assessing Google
11 geofence warrants, have you come to believe that there
12 are certain best practices in terms of putting
13 together a geofence warrant?

14 A Yes, I have.

15 Q Okay. And can you tell us some of those best
16 practices particular as relates to a radius?

17 A Yes, particularly to drawing the geofence, it
18 differs between investigations from investigation to
19 investigation. In the example of a bank robbery,
20 we're looking for a few things. We need to cover the
21 area of the crime, the bank, but we're also looking
22 for areas where the subject may have entered the area
23 or exited the area. We're looking for areas where the
24 suspect may have parked a vehicle, because we know a
25 few things about bank robberies.

D'ERRICO - DIRECT

513

1 (A) They don't always park in the front space in
2 the front of the bank to go in and rob that bank.

3 (B) We typically see them park a little bit of a
4 distance away, sometimes in the next parking lot.

5 We also know that Google location records in a
6 normal interval occur approximately every two minutes.
7 So we need to take these calculations into effect when
8 we're drawing a radius or a box for a geofence
9 warrant.

10 We try not to capture roadways or other areas
11 where many people may be passing through unless it
12 could be relevant to the investigation. Whereas, in a
13 child abduction, we may want to capture a roadway so
14 that we can talk to people that may have seen the
15 child walking across or along the roadway.

16 So it really varies based on the type of crime and
17 the layout of the crime scene area.

18 Q Now, did you prepare a report, a presentation, in
19 anticipation of this hearing?

20 A Yes, I did.

21 Q I'm going to show you the pages of Government's
22 Exhibit 1 and let you take a look at those. It's in
23 the folder in front of you. Do you see Government's
24 Exhibit 1 there?

25 A Yes, I do.

D'ERRICO - DIRECT

514

1 Q Is that the presentation that you prepared?

2 A Yes, it is.

3 MR. SIMON: All right. We move to admit
4 Government's Exhibit 1. I know it's been questioned
5 on already.

6 THE COURT: No objection?

7 MR. PRICE: Your Honor, there is one slide
8 that we anticipate having an objection to.

9 THE COURT: Okay. Do you want to lay the
10 foundation for it now so it doesn't go on the record?

11 MR. PRICE: Sure. This would be Slide
12 No. 47.

13 THE COURT: What is the basis of the
14 objection?

15 MR. PRICE: Relevance, Your Honor. It's our
16 understanding that this web page and the language on
17 it --

18 THE COURT: Okay. I'm having trouble with
19 your mask.

20 MR. PRICE: It's our understanding that this
21 web page and the language on it did not exist until
22 2020, long after the events in question in this case.

23 MR. SIMON: Judge, I think my response to
24 that objection to relevance is that we've seen
25 exhibits come in and out of evidence with no regard

D'ERRICO - DIRECT

515

1 for, I think, dates in part because it does offer some
2 context here in terms of what location services and
3 Location History mean to Google. And I think that's
4 certainly more of a weight, particularly at this
5 hearing. So, Judge, I'd ask to leave that slide in in
6 the presentation.

7 THE COURT: I'm going to make the same ruling
8 I did with respect to much of what you entered in.
9 You can cross-examine about it and argue the weight of
10 it, and present the weight of it, but we're really not
11 in an evidentiary hearing in any event, and I'm trying
12 to keep the record full so that whatever arguments
13 need to be made can be supported and challenged in a
14 complete way. So it's overruled.

15 MR. PRICE: Thank you, Your Honor.

16 (Government's Exhibit No. 1 is admitted into
17 evidence.)

18 BY MR. SIMON:

19 Q Now, Special Agent D'Errico, I want to talk
20 about -- you heard me earlier, I'm sure, ask witnesses
21 about GPS points and Wi-Fi points. I want to talk
22 about, first, the Slide No. 3 here.

23 MR. SIMON: And I'm just referring to the
24 page numbers that will be on the bottom right, Judge,
25 of each page.

D'ERRICO - DIRECT

516

1 BY MR. SIMON:

2 Q Can you explain for us what we're talking about
3 when we talk about a GPS point?

4 A Yes. The GPS points in the record, and those are
5 points that have a source of GPS, those points are
6 primarily captured using the Global Positioning
7 System. And the Global Positioning System uses a
8 network of satellites that are in orbit around the
9 earth, and they are constantly broadcasting signals.

10 The phone, the mobile device, needs to hear at
11 least four of those signals in order to determine the
12 latitude, the longitude, the altitude, and the time.
13 And there's information specifically coded into those
14 satellite transmissions, those broadcasts, that allow
15 the device to do that.

16 Now, in order to get a good fix or a good location
17 with GPS, you need to be able to hear those satellites
18 or the device has to hear those satellites. So GPS
19 does not work very well inside of buildings such as
20 this but works very well outside, and is what we
21 typically rely on for navigation, realtime navigation
22 with a GPS device or turn-by-turn navigation.

23 Q Now, we didn't just get GPS points in the returns
24 here; right?

25 A Correct. We also received points that were

D'ERRICO - DIRECT

517

1 primarily derived using Wi-Fi access points, and
2 they're marked as Wi-Fi in the source column.

3 Q In Slides 4 and 5, do you explain that?

4 A Yes, I do.

5 Q Okay. And so looking at sort of Slide 5 -- and
6 we'll bring up both 4 and 5 next to each other. But
7 when we talk about Wi-Fi fingerprinting, can you
8 explain what we're talking about there?

9 A Yes. On page 5 is an illustration of Wi-Fi
10 fingerprinting, and this is a technique that is used
11 to determine the location of a device using Wi-Fi
12 access points. And Wi-Fi access points are stationed
13 all over, right? So if you are able to access Wi-Fi
14 on your phone, you're within range of a Wi-Fi access
15 point.

16 Now, the way that fingerprinting works is that
17 there's a two-step method. The first step, which is
18 above the dotted line on page 5, is what we call
19 training data. And this is when we have a phone that
20 can hear access point No. 1, access point No. 2, and
21 access point No. 3, or, in this case N, because it can
22 be more than three access points.

23 It hears these access points, doesn't necessarily
24 have to connect to those access points, but hears them
25 and can measure the signal strength of them.

D'ERRICO - DIRECT

518

1 Also at the same time, the mobile device is taking
2 a GPS coordinate. So it's actually determining its
3 location with GPS but also collecting the Wi-Fi
4 broadcast in the area. And what happens with this
5 data is it's sent up to Google as part of the Location
6 Accuracy service. And that Location Accuracy service
7 is an opt-in service on Android phones that allows
8 Google to collect the approximate location of Wi-Fi
9 access points.

10 THE COURT: I'm sorry. Can you use the
11 phrase again? Location what service?

12 THE WITNESS: Location Accuracy.

13 THE COURT: Okay.

14 BY MR. SIMON:

15 Q In looking at Slide 6, does Google notify
16 individuals that they will be using Wi-Fi access
17 points to assess location devices?

18 A They do. Can I go back to Slide 5 and finish the
19 bottom?

20 Q Sure.

21 A I'm sorry. So, we talked about the training data
22 set up top. The next set comes in on the bottom of
23 that page where a phone does not collect a GPS
24 coordinate, but it does collect the Wi-Fi access
25 points and the signal strengths. It can then send

D'ERRICO - DIRECT

519

1 that information to Google, which collected a database
2 and created a fingerprint, so to speak, and associated
3 the same access points with similar signal strengths
4 to determine an approximate location.

5 So there's no need to know an exact location for
6 every access point in the world. What we need to know
7 is the access points in relationship to others and
8 approximate signal strengths. Using that information,
9 we are able to efficiently determine a location
10 without using GPS.

11 And there's occasions where we don't want to use
12 GPS because GPS is very expensive on the battery. We
13 heard Mr. McGriff testify that there might be problems
14 if there were thousands of points, particularly GPS
15 points, from a device. So Wi-Fi is a less expensive
16 but still accurate method of providing the approximate
17 location of a device.

18 Q Okay.

19 A Thank you.

20 Q And to go back to my previous question, is Slide 6
21 demonstrating Google's notification to customers that
22 it uses Wi-Fi access points to assess location?

23 A Yes, it does.

24 THE COURT: You're so far away from the
25 microphone.

D'ERRICO - DIRECT

520

1 MR. SIMON: I apologize.

2 THE COURT: You're talking to him, but we're
3 the people who need to hear it.

4 MR. SIMON: No, I understand. And I moved a
5 little bit, so I'll try to maintain --

6 THE COURT: That's fine.

7 BY MR. SIMON:

8 Q So I'm looking at Slide 6. Is that slide
9 demonstrating Google's notification to its customers
10 that they use Wi-Fi points to assess location?

11 A Yes, there's two places on Google's site that
12 discussions Wi-Fi and the use of it. So in the top
13 block, Google says, To improve location services,
14 Google uses publicly broadcast Wi-Fi data from
15 wireless access points and GPS, cell towers, and
16 sensor data. Only publicly broadcast Wi-Fi
17 information is used to estimate the location of a
18 device.

19 In a separate article, it also talks about how you
20 can, as a Wi-Fi point owner, opt-out of Google using
21 your Wi-Fi access point in location services.

22 And on the bottom, Google also talks about their
23 Google location services, otherwise known as Google
24 Location Accuracy. That uses information of nearby
25 Wi-Fi mobile networks and device sensors to improve

D'ERRICO - DIRECT

521

1 its location device or its location data using the
2 Android phone.

3 Q Okay. Now, I want to show you what we've marked
4 as --

5 THE COURT: I'm just going to ask a question.
6 You said there's a separate article about how you can
7 turn it off. That's not reflected on this slide;
8 right?

9 THE WITNESS: Correct, that is not reflected
10 in the slide.

11 THE COURT: Okay.

12 BY MR. SIMON:

13 Q And I just want to now have you look at
14 Government's Exhibit 2.

15 A Excuse me?

16 Q Government's Exhibit 2.

17 A Yes.

18 Q Do you recognize the pages set forth in
19 Government's Exhibit 2?

20 A Yes, I do.

21 Q What is it?

22 A This is the search warrant and affidavit that
23 Detective Hylton submitted for the Google geofence
24 warrant.

25 Q Okay. And that's a fair and accurate depiction, I

D'ERRICO - DIRECT

522

1 presume, of that application?

2 A Yes, it is.

3 MR. SIMON: Judge, we move to admit
4 Government's Exhibit 2 at this point.

5 THE COURT: Okay. No objection; correct?

6 MR. PRICE: No objection, Your Honor.

7 THE COURT: Okay. It's entered.

8 (Government's Exhibit No. 2 is admitted into
9 evidence.)

10 BY MR. SIMON:

11 Q Now, let me ask you about the geographical area.
12 We've talked about that phrase throughout the few
13 days. What geographical area was deemed relevant to
14 the search warrant in this case, looking at Slides 8
15 and 9?

16 A And this is back in Defense Exhibit 1?

17 Q Defense Exhibit 1, yes.

18 A So Slide 8 on my report, Defense Exhibit 1, shows
19 a red dot towards the center of the slide with a red
20 circle around that slide. The red dot is the center
21 of that geofence, whereas the red circle illustrates
22 the effective geofence, which is 150 meters away in
23 every direction from that center point.

24 Q Okay. And so this is the geofence radius we have.
25 Now, did you put slides together to sort of

D'ERRICO - DIRECT

523

1 demonstrate what factual points went into developing
2 that geofence?

3 A Yes, I did. Slide 9 goes into that point. So
4 it's important for us to capture all areas where
5 somebody could stash a car or hide a car, and also all
6 areas where somebody could arrive or leave from this
7 crime scene.

8 So, in this case, what was done was the geofence
9 on the right side goes up to but doesn't cover the
10 road, which is Price Club Boulevard, traveling north
11 to south and curving towards the west under the
12 geofence. On the south side of the geofence, that
13 area covers the area behind Journey Christian Church,
14 which is the church where we received information that
15 a suspicious blue Buick was parked, and it also covers
16 the wooded area, because we know that subjects when
17 fleeing a bank robbery may not --

18 Q Special Agent D'Errico, I'm sorry to interrupt
19 you, but can we look at, while you're explaining this,
20 Slides 10 and 11, because I think some of those points
21 might be in there; right?

22 A Yes. We also cover the area south because we know
23 subjects may flee through the woods and may not use
24 the road system.

25 On the left, we cover up to the adjoining

D'ERRICO - DIRECT

524

1 business, which we can see also covers some trails.
2 And then to the north, we try to cover as much of the
3 parking lot as we can but try not to cover the area
4 near the Hampton Inn.

5 And on Slide 10, we have additional information
6 laid on the map, particularly yellow markers that
7 indicate the approximate location where we saw the
8 subject via surveillance cameras from both Journey
9 Christian Church and from Call Federal Credit Union.

10 There are two triangles or partial triangles on
11 the maps with the points attached to the side of the
12 church. The one in purple towards the bottom is the
13 field of vision of one of the cameras, one of the
14 surveillance cameras, that we were able to obtain
15 surveillance footage from.

16 The one towards the top, in orange, is, again, a
17 field of view of a second surveillance camera that we
18 were able to get coverage from or a video from during
19 the time of the robbery.

20 And then we have video surveillance from the area
21 withinside the Call Federal Credit Union. And each
22 one of those yellow pinpoints indicates a point where
23 I observed the subject on this map.

24 So we can see that there were video observations
25 that start on the bottom with No. 1 and travel the

D'ERRICO - DIRECT

525

1 parking lot in between the church and the credit union
2 towards the north, and then there's points,
3 specifically points 4, 5, and 6, where the subject
4 moves towards the Call Federal Credit Union.

5 There's point 7, which is inside Call Federal
6 Credit Union. And then points 8, 9, and 10 show
7 points where the subject was running from the Call
8 Federal Credit Union towards the -- well, out of the
9 field of vision but south back towards where we
10 originally saw him on video.

11 Q Now, did you assess for your presentation -- and
12 these slides are coming up on the screen as well, if
13 it's easier to see them. Did you assess and compare
14 the geographical area covered by the geofence in this
15 case with what's covered by a cell tower dump?

16 A Yes, I did.

17 Q Is that reflected in Slide 13?

18 A Yes, it is. Slide 13 shows the approximate area
19 of coverage that I would expect to receive if we
20 conducted a tower dump for this crime.

21 Q Now, before you go into it, just for the record,
22 how would you describe a cell tower dump? What is it?

23 A A cell tower dump is when we obtain a 2703(d)
24 court order to obtain communication records from the
25 cellular providers that correspond to communications

D'ERRICO - DIRECT

526

1 that happen on a particular cell tower.

2 And, typically, when we obtain tower dumps, we
3 look to obtain any cell site that would provide
4 coverage to the subject area. In this case, the Call
5 Federal Credit Union.

6 We know that cell phone towers overlap, and that's
7 what allows us to move seamlessly from one cell tower
8 to the next cell phone tower. So we choose three to
9 make sure we are getting complete coverage or as much
10 coverage as possible of that target area, that subject
11 area.

12 Q And we heard earlier that cell tower dumps provide
13 phone numbers; is that right?

14 A That's correct. When the phone companies respond
15 back to the 2703(d) order, they provide the actual
16 phone numbers used in the communication. So they are
17 not anonymized. They are the actual telephone numbers
18 used in that course of the communication.

19 Q What, if anything, does the government tell a
20 cellular telephone company to do in terms of how they
21 would provide that information? Do we tell them how
22 to go about finding the information from the cell
23 tower?

24 A No, we don't direct them on how to respond to the
25 Court order other than directing them to provide

D'ERRICO - DIRECT

527

1 records that cover that area.

2 So my understanding is that they use the processes
3 that they have in order to obtain those records that
4 they use in their ordinary course of business.

5 Q And what -- you've dealt with both types of
6 warrants, geofence warrants and cell tower dumps,
7 which can come by a subpoena; right?

8 A A cell tower dump?

9 Q Yes.

10 A I've only obtained them with a 2703(d) or a search
11 warrant.

12 Q The -- but the information that comes from the
13 cell tower dump and the geofence warrant, which one
14 provides more data back?

15 A Typically, more data is received in the tower
16 dump. It will provide -- yeah, more information
17 typically is from a tower dump. It does depend, but
18 usually it's a tower dump.

19 Q When I sort of say "information," it's like each
20 phone number that comes out of there belongs to a
21 particular user; right?

22 A That's correct. We get the actual phone number of
23 the user that was in this area as well as the
24 direction from the tower. So it's not just that they
25 were in that area, but it's the direction from that

D'ERRICO - DIRECT

528

1 tower that we also obtain. So an approximate location
2 for that device.

3 Q Just for the record, you can subpoena, then, the
4 subscriber information for those phone numbers; right?

5 A We can. We can use a subpoena to obtain
6 subscriber information or use other databases to
7 attempt to determine the actual -- the person who has
8 it in their hand.

9 Q Now, we've talked about the various stages of the
10 geofence warrant. Did you go about providing a
11 summary of the records returned in the first stage for
12 your presentation?

13 A Yes, I did.

14 Q Okay. I'm going to have you take a look at Slide
15 17.

16 THE COURT: I'm going to ask a question
17 before you get there. Looking at Slide 13, the blue
18 area, I presume, is the area where you might get
19 information from a tower dump; is a right?

20 THE WITNESS: That's correct. And I've
21 estimated that based on all of these towers in the
22 area because we know that towers overlap. So we
23 estimated that the three towers that are inside the
24 blue area would be the towers that would be dumped in
25 response to a tower dump order. And that approximate

D'ERRICO - DIRECT

529

1 coverage area would be approximately the size of that
2 blue outlined area.

3 THE COURT: So how big is the blue outlined
4 area?

5 THE WITNESS: I didn't do an area comparison,
6 but on the bottom of the map, Your Honor, there is a
7 scale that indicates that it's 4 kilograms between
8 those two points. So width-wise, Your Honor, I would
9 say at the widest part, and I am just eyeballing this,
10 it may be 7 or 8 kilometers wide at the widest part
11 traveling east to west. And then traveling the area
12 north to south, this area may be about 10 kilometers
13 north to south.

14 THE COURT: All right.

15 THE WITNESS: Also on that map is the red
16 circle indicating the size of the geofence.

17 THE COURT: Right. Okay. Thank you.

18 BY MR. SIMON:

19 Q Now, looking at the summary of records from Phase
20 1 and Slide 17, if we look at the top here, it says,
21 Initial Google Geofence records provided by Google and
22 the first 15 of 209 records. What's meant by the
23 first 15 of 209 records?

24 A This is just a sample of what the records look
25 like when they come to us from Google. And, actually,

D'ERRICO - DIRECT

530

1 they're not even this pretty. But they contain
2 several columns of information, including a device ID
3 that's going to be unique for the device inside this
4 geofence, the date and the time, the latitude and the
5 longitude providing an approximate location. And I
6 should say the center of the approximate location for
7 the device. The source of the device, which is, my
8 understanding, the primary sensor that was used to
9 obtain this.

10 In this case, we saw records with GPS or Wi-Fi.
11 There's also records out there in other Geofences that
12 use cellular towers and will be reported under cell.

13 And then the last column is the map display
14 radius, which is the true area around the center point
15 where Google believes that device may be.

16 Q Okay. Now, did you -- and let me ask you, you
17 mentioned the map display radius. Whenever we see
18 that, it has the same meaning across these returns;
19 right?

20 A Correct. That M stands for meters.

21 Q How would you -- I think you've done it. Would
22 you describe sort of our best understanding of map
23 display radius?

24 A Map display radius is the area where Google
25 believes that the device is located. So while they

D'ERRICO - DIRECT

531

1 provide us latitude and longitude coordinates, that's
2 not the actual location of where Google believes it
3 is. That's the center of the location where Google
4 believes it is.

5 If I could, I would draw maps without a center
6 point in it and just a bubble because that's a better
7 representation, but it's hard to get the scale or it's
8 hard to understand how many points are then layered on
9 there.

10 So in the maps that I have, I'll draw it with the
11 center point as well as the bubble around the display
12 radius, understanding that it's not the point that
13 Google is saying that the device is at, it's inside
14 the bubble where Google is saying that the device is.

15 Q Okay. Now, looking at Slide 20, did you plot all
16 the points returned in Stage 1 of the warrant?

17 A Yes, I did.

18 Q Okay. Is this an indication of those plot points?

19 A Yes, this is all 209 points for Stage 1 of this
20 search warrant return plotted on the map with both
21 their center coordinates marked by the markers, the
22 red or blue markers, and then the display radiuses
23 associated with each of those points.

24 Q There was some discussion of the 387-meter radius
25 that one of these points provided. Can you explain

D'ERRICO - DIRECT

532

1 why we had such a large radius for one point and then
2 right before that right there was a smaller radius?

3 A Yes. So in the records, there are two records
4 that are very close in time. I believe it's within 30
5 seconds. But more notable is that they were both
6 Wi-Fi records, and they had the exact same latitude
7 and longitude.

8 The first record had a display radius of about --
9 I believe it was 84 meters. So a smaller display
10 radius that was inside the geofence.

11 The second point, about 30 seconds later, had the
12 same exact center coordinates, but it had a much
13 larger display radius, 387 meters. And in my
14 experience analyzing these records, that's indicative
15 to me that the device is moving, that it's traveling.
16 And for some reason, unknown to me, a new center
17 coordinate was not obtained by that phone. But based
18 on the other sensors in the phone, such as a gyroscope
19 which determines the tilt and the angle of the phone,
20 or the accelerometer, which determines how fast a
21 phone is traveling, Google can use these sensors
22 together and determine that this phone moved, and I'm
23 going to adjust my display radius to account for that
24 movement.

25 Unfortunately, it's not as simple as just using

D'ERRICO - DIRECT

533

1 the GPS coordinates or just using the Wi-Fi
2 coordinates. There are lots of different sensors that
3 go into these calculations.

4 Q Now, did you ultimately -- I know you did. You
5 reviewed the warrant in this case; right?

6 A Yes, I did.

7 Q And did the warrant call on Google to return any
8 information at that first phase? We're just talking
9 about the first step of the search warrant. Did it
10 call on Google to return any information that it
11 determined fell outside of that geofence radius?

12 A No, it did not. The first stage asked for
13 information regarding points inside the geofence.

14 Q Okay. Now, I'm looking at Slide 21. Is this an
15 example of, again, sort of what area is covered by the
16 geofence as opposed to the cell tower radius?

17 A That's correct. I plotted all of those points
18 that we saw on page 20 in the geofence onto the map
19 that has the outline of the estimated tower dump area.

20 Q Okay. And with respect to the records that we saw
21 plotted in Slide 20, can we take a look at Slide 22.

22 Is this a fuller summary of those records?

23 A It is. This is a summary device-by-device that
24 lays out how many records we received for each device,
25 the first time that we received a record or the

D'ERRICO - DIRECT

534

1 earliest record for each device, the latest record for
2 each device, and then we also looked at the smallest
3 display radius, and the largest display radius.

4 And then I took a look just to see how many of
5 those display radiuses extended beyond the geofence
6 area and then what was the maximum distance beyond
7 that geofence area.

8 Q When we say "extend beyond," again, we're talking
9 about just that blue radius that might fall a little
10 bit outside the geofence but for which Google has
11 concluded they are inside the geofence?

12 A Correct. All the center points are within the
13 geofence. And these are the map display radiuses for
14 each of those center points.

15 Q Okay. In looking at -- you were just testifying
16 about those two points that have, sort of within 30
17 seconds, a different -- a vastly different Wi-Fi
18 radius point. Is that set forth in the device ID line
19 that ends 4289?

20 A It does. 702354289.

21 Q Okay. Now, how many points were provided in that
22 first phase of records returned by Google?

23 A 209.

24 Q How many of those points belong to the defendant?
25 And can you state for the record which of these

D'ERRICO - DIRECT

535

1 accounts on page 22 belongs to the defendant?

2 A Yes. The defendant is the device ID second from
3 the bottom. It's 1716665659. And the records -- we
4 received 38 records for that device beginning at
5 4:20 p.m. and ending at 4:54 p.m.

6 Q Okay. And if I'm looking here, it appears we
7 don't have the header of each of these columns, but is
8 it right that only one of his points have any radius
9 that extends at any point? The bubble might go a
10 little bit outside of the geofence?

11 A That's correct. There was one Wi-Fi point that
12 would extend 26 meters outside the radius. And that's
13 the equivalent to a few parking spaces.

14 Q Okay. And, now, did you plot the defendant's
15 records?

16 A Yes, I did.

17 MR. SIMON: Can we look at Slides 23 and 24.

18 THE COURT: Let me just -- 26 meters is
19 26 yards; right?

20 THE WITNESS: Approximately. It's not exact.

21 THE COURT: That's two parking spaces?

22 THE WITNESS: Oh, I'm sorry. A few parking
23 spaces. So a park space is typically about 3 meters
24 wide. So that would be about, what did I say it was?
25 Twenty-six. So about six to seven parking spaces.

D'ERRICO - DIRECT

536

1 THE COURT: All right.

2 THE WITNESS: And that's width, not depth?

3 THE COURT: Right.

4 BY MR. SIMON:

5 Q If we look at the -- particularly Slide 24. When
6 you talk about a point extended beyond the geofence
7 radius, which point, looking on Slide 24, is that
8 point?

9 A The point that extends beyond is that point that's
10 furthest north. And the center of that point is in
11 the parking lot towards the north or the furthest
12 north of the parking lot of the church.

13 Q Would it be fair to say that a very small portion
14 of that display radius extends beyond the geofence?

15 A Correct, a majority -- a significant majority is
16 withinside the geofence.

17 Q And every other plot point there is well within
18 the geofence; correct?

19 A Yes, it is.

20 Q Now, did you also -- we've talked about Phase 1.
21 What happens in the second stage of the warrant? How
22 does that work?

23 A The second stage of the warrant is where Detective
24 Hylton sent to Google a list of device IDs that were
25 identified as being relevant to the investigation for

D'ERRICO - DIRECT

537

1 additional location data for those device IDs. And
2 that would include, I believe, 30 minutes prior and 30
3 minutes following the original geofence time frame
4 with no restraints on location, so that we can see the
5 path of travel for these devices.

6 Q Is that the -- what we heard Sarah Rodriguez refer
7 to as sort of the second stage, being that contextual
8 Location History information?

9 A That's correct. It provides context for us so
10 that if there is somebody that is just driving by, we
11 try to eliminate them if we can. If there is somebody
12 that is in another parking lot, still within the
13 geofence and not in the area, we try to eliminate
14 them, if we can, or we may need more additional
15 information to evaluate them as a suspect and either
16 eliminate or include them as a suspect.

17 Q Now, did you do the same thing that you did at the
18 first stage with those second round records in terms
19 of summarizing what we got back?

20 A Yes, I did.

21 Q All right. Looking at Slide 26, is this the --
22 are these the summaries of those records?

23 A These are. It summarizes the nine device IDs that
24 we obtained records for from Google in Stage 2.

25 Q And it looks like the number of records this time

D'ERRICO - DIRECT

538

1 is a bit larger. We've got more records; right?

2 A That's correct. This time we received 680
3 records.

4 Q Okay. And if we look at the far right, there is a
5 smallest maps display radius and a largest maps
6 display radius. Describe those.

7 A That's correct. So, similar to how I analyzed the
8 Stage 1 data, I also looked at the size of the display
9 radiuses for the Stage 2 data. And those columns
10 reflect the smallest display radius for that device
11 and the largest display radius for each device.

12 Q And how many of those records in the second stage
13 belong to the defendant's account?

14 A The defendant, again, device ID 1716665659, the
15 second line from the bottom. We received 94 records
16 for the defendant's device.

17 Q And this is a second stage that gives that
18 additional 30 minutes on each side of the time, but
19 also has no regard for -- at this point we're outside
20 of the geofence now; right?

21 A That's correct. We can see the path of travel for
22 each of these devices or if they were stationary for
23 this time, we could see that as well. But it does not
24 have the geographical constraints of being immediately
25 in the area of the bank robbery.

D'ERRICO - DIRECT

539

1 Q And these second stage records, to the extent we
2 get them, that's after a discussion generally between
3 law enforcement, maybe the prosecutor and others
4 involved; right?

5 A Correct. We evaluate each of the devices and
6 determine if this device could be a witness to the
7 crime, could be a suspect to the crime, could be an
8 accomplice. We evaluate each of them to make a
9 determination.

10 Q And what, if anything, goes into consideration
11 of -- and particularly in this case, was there any
12 consideration of the need to not only inculcate
13 somebody, sort of inculpatory evidence, but
14 exculpatory evidence?

15 A Absolutely. We would like to exclude as many
16 people as possible. And we can use the second stage
17 to do that, to make sure that we're looking at the
18 person that's actually responsible for committing this
19 crime.

20 Q Okay. In looking at Slides 27 and 28 -- I'm
21 sorry, 28 and 29, are these the plotting of the
22 defendant's records at Stage 2?

23 A Yes. So Slide 28 shows the complete records for
24 the defendant in Stage 2 from about 3:50 p.m. through
25 5:50 p.m.

D'ERRICO - DIRECT

540

1 Q All right. Let's look at the left side here.

2 Maybe we'll just bring it up by itself, Slide 28.

3 Can you walk us through the numbers here? Is this
4 going in sequential order, the one through seven boxes
5 here?

6 A Yes. So the first records we received are on the
7 top of the page, the bubble to the right. The box is
8 marked with a No. 1. There's two records in that
9 area, both with the exact same latitude and longitude,
10 the exact same center point. And those points are at
11 3:53:10 p.m. and 3:55:20 p.m.

12 The first point is 104 meters. And then we see
13 that second point expand to nearly 1800 meters, which,
14 again, is indicative to me of travel.

15 Then we see the device show up on -- towards the
16 top left of the slide illustrated by Box 2 with a
17 similar situation, 3:57:23 p.m. and 3:59:32 p.m., two
18 records with the exact same center points, exact same
19 latitude and longitude, the first one with a smaller
20 display radius of 92 meters, and the second one with a
21 larger display radius of over 1700 meters. Again,
22 indicative of travel.

23 Q In looking at those two points, just to make sure
24 we're talking about this right, this is prior to the
25 robbery; right?

D'ERRICO - DIRECT

541

1 A Yes, it is.

2 Q And so these, again, are records at the second
3 stage that are going to give us more context about
4 where folks are moving?

5 A That's correct.

6 Q In looking at now -- you went through one and two.
7 The third box here, can you go through those?

8 A Excuse me. Which boxes?

9 Q The third box of records on Slide 28.

10 A Yes. The third box contains the records in the
11 immediate vicinity. Just about all the records for
12 the geofence. And those are records for the time of
13 4:01 p.m. to 4:54 p.m. And those records are in that
14 immediate vicinity of the Call Federal Credit Union
15 and Journey Christian Church.

16 Q And so this is 54 of the records that we got at
17 the second stage? I'm sorry. These are records that
18 would be in both stages; right?

19 A Correct. Box 3 are records that would be -- not
20 all -- I don't believe all of them are in the second
21 stage, but most of them are. They're in that area.

22 Q Then you can -- can you walk us through what else
23 we have here?

24 A Yes. Box No. 4 illustrates a GPS trail. So when
25 I map these records, I think it's important to denote

D'ERRICO - DIRECT

542

1 the source of the record. So my red points are going
2 to be GPS-based records and my blue points are going
3 to be Wi-Fi-based records.

4 So we can see a trail in rapid succession more
5 detail than we see anywhere else on this map of points
6 from 4:58 p.m. to 5:04 p.m. with very small display
7 radiuses of 3 meters to 10 meters leading away from
8 the area of the bank robbery, down towards the area of
9 288, which is the road that traverses west to east on
10 the bottom of the map.

11 Q Okay. Now, did you ultimately look at some sort
12 of final records from this supplemental return?

13 A I did. Records 5, 6, and 7, those blocks,
14 illustrate travel back towards the Mason Dale Drive
15 area with the box with No. 7, the 18 Wi-Fi records,
16 being in that immediate area of Mason Dale Drive.

17 Q In looking at Slide 29, is this the area of Mason
18 Dale?

19 A Yes, it is. I've drawn all of the Wi-Fi points
20 and the display radiuses on the map, as well as I
21 tried to point out every residence that is either
22 touched or in the area of those locations provided by
23 Google.

24 Q What residence, ultimately, did Detective Hylton
25 conclude, based on additional investigation, belonged

D'ERRICO - DIRECT

543

1 to the defendant?

2 A The address was 4702 Mason Dale Drive. The box is
3 the second box down on the right side, which points
4 pretty much to the center of the screen.

5 Q Now, using any of these particular Wi-Fi points,
6 is it apparent exactly which house is hitting these
7 Wi-Fi points?

8 A No. These records are not clear enough for me to
9 say go get a search warrant to arrest or conduct a
10 search of a house in this area. Additional
11 investigative steps are needed in order to refine this
12 data and determine where this device actually was
13 located at this time.

14 Q Okay. And so this is -- this is the full extent
15 of the second stage that we see here?

16 A That's correct, yes.

17 Q Okay. Now, looking at Slides 31 and 32, what
18 happens at the third stage of the warrant?

19 A The third stage is where we go to Google again,
20 and we submit to them the device IDs of which we want
21 subscriber information for those device IDs. We
22 requested three device IDs. And Google provided four
23 things. They provided a file that maps the device ID
24 that was in our geofence warrant to the account's
25 Google ID. And based off that Google ID, they

D'ERRICO - DIRECT

544

1 provided the subscriber information for that account.

2 And that's because that device ID is not a unique
3 identifier across the entire Google-sphere. It is
4 only a unique identifier within an account and within
5 this geofence.

6 Q In looking at, on the right side, at Slide 32, is
7 that the precise subscriber information we got for
8 this defendant's device at the third stage?

9 A That's correct. So up top there's the table of
10 the GAIA ID, which is the Google ID with the device ID
11 that we mentioned before being associated with the
12 defendant, 1716665659. We can see that that
13 associated Google ID is listed in the subscriber
14 information file that is on the lower part of the
15 page, which is associated with the account that
16 contains the name Jamaican Media with an email address
17 of okellochatric55@gmail.com.

18 Q Okay. Does it appear, the created on date there?
19 There's a line that says "created on" on the right
20 side on Slide 32. What is that?

21 A Yes. Three lines above the highlighted Google
22 account ID there is a created on date, which indicates
23 that this account was created on August 20, 2017 at
24 6:04 p.m. UTC.

25 Q And between August 2017 and July 2018, according

D'ERRICO - DIRECT

545

1 to Google records, Location History wasn't enabled on
2 the relevant device; right?

3 A Can you repeat that question?

4 Q Well, let me ask it this way, because I think you
5 have some facts about this. When the phone that the
6 defendant enabled Location History on, the Samsung
7 Galaxy S9, do you have a sense of when that phone came
8 to market?

9 A I do. I believe --

10 Q It's Slide 38.

11 A Yes. It came to market on March 16, 2018, which
12 is several months after the date of the creation date
13 for this Google account.

14 Q Okay. And I think that my question that was going
15 to be there, I'll just scratch that from the record.
16 It wasn't to the point.

17 Now, with respect to the third round of
18 information that we got on the three IDs, did you
19 ultimately plot the points for the other two devices
20 that we requested subscriber information on?

21 A Yes, I did.

22 Q Okay. Let's look at the device that ends in 2662
23 and Slides 33 and 34.

24 A Slide 33 indicates the one point that we received
25 back, the one record of Location History that we

D'ERRICO - DIRECT

546

1 received in Stage 1 for device 907512662. And that
2 plots a center point over the Journey Christian Church
3 at about 4:35 p.m., prior to the time of the bank
4 robbery.

5 Q Okay. And so why go back at the second stage
6 here?

7 A Well, there are several reasons. So, the first
8 reason is this is a device that was present in the
9 area of the bank prior to the bank robbery. And we
10 know that sometimes when people want to hide their
11 location, they'll turn their phones off. And if their
12 phone is turned off, no additional Location History
13 would be reported for that device. So it's
14 significant to us that there is a point inside the
15 geofence that occurred prior to the bank robbery with
16 no points after the bank robbery. Because we also
17 believe that after a subject has robbed a bank, that
18 they are going to flee the area and not be -- or not
19 have any additional Location History records within
20 this geofence several minutes after the bank robbery.

21 Q And, now, what about on the right side? Are we
22 seeing the second stage records after we've requested
23 the second stage on this device?

24 A That's correct. This is a plot of the second
25 stage records which travel a bit in the area. The

D'ERRICO - DIRECT

547

1 first record that we have is 4:35 p.m. in the vicinity
2 of the Journey Christian Church, and that's towards
3 the top of the page with a call out box on the right
4 side. That is the same point that we saw in the last
5 slide.

6 The next reference point on the slide is travel
7 towards the south ending up near box No. 2 where there
8 are records at 4:47 and 4:53 p.m.

9 After this box, the phone retraces some of its
10 steps north and then ends up near the apartment
11 complex just south of the Call Federal Credit Union in
12 Boxes 3 and 4. And to me, this is indicative of a
13 trail of somebody that could have dropped off somebody
14 in the parking lot, traveled a ways, and then returned
15 to possibly pick up somebody that traveled through the
16 woods between the Call Federal Credit Union and the
17 apartment complex directly south of that area.

18 Q Okay. And there was a third device that we saw
19 subscriber information on; correct?

20 A That's correct. That was device -1662304683.

21 Q And you plotted those points on Slides 35 and 36?

22 A Yes, I did.

23 Q All right. Now, tell us, when we pull those up on
24 35 and 36, what we see in Slide 35 at Stage 1 inside
25 the geofence and why go back at Stage 2 and get

D'ERRICO - DIRECT

548

1 supplemental records on this particular record?

2 A Yes. These initial records that we received in
3 Phase 1 shows us three Wi-Fi points. Two of the
4 center points are directly on top of the Call Federal
5 Credit Union and one location point is towards the
6 right that covers the area of the Journey Christian
7 Church. These points are between 4:44 and 4:47 p.m.
8 And for the same reasons that I discussed prior, we
9 know that subjects may turn off their phone to avoid
10 transmitting Location History or device or being
11 observed on the cellular network to obscure their
12 location.

13 So with this device having points before and no
14 points after, we thought this was -- we needed
15 additional records to be able to see the context of
16 this travel.

17 Q What about the second stage? Is that on the right
18 side?

19 A Yes, Slide 36 provides that context of travel for
20 us. And the first record we see is towards the center
21 of the screen. There is a cluster of points marked by
22 box No. 1 at 4:39 p.m.

23 There's another cluster of points that traveled
24 northeast on Hull Street towards box No. 2, which is
25 the area of the Call Federal Credit Union and the

D'ERRICO - DIRECT

549

1 Journey Christian Church. And those records are there
2 at 4:44 through 4:47 p.m.

3 And then we see the phone travel back east -- I'm
4 sorry -- travel west on Hull Street Road or appearing
5 to be traveling -- appearing to be near Hull Street
6 Road marked with box No. 3 at 4:55.

7 This becomes interesting to us because we see
8 somebody that starts away from the bank, moves towards
9 the bank, and then immediately leaves that area, which
10 could indicate that they are dropping somebody off at
11 that bank.

12 Q Now, just let me end with a question going back to
13 Slides 23 and 24. We've talked about the
14 investigation in this case and, in particular, I'm
15 looking at the defendant's plot points on 23 and 24
16 when they come up. Did you and Detective Hylton reach
17 a conclusion about whether this was the account, just
18 based on Stage 1, that belonged to the person who
19 robbed the Call Federal Credit Union on May 20, 2019?

20 A Based on several pieces of evidence, including
21 witness testimony that indicated there was a
22 suspicious blue Buick parked behind the church, which
23 is notated on Slide 24 with the green box in the area
24 where the red GPS points are clustered, combined with
25 the video observations from the Journey Christian

D'ERRICO - DIRECT

550

1 Church and the Call Federal Credit Union, and the
2 description of the individual and the visual of the
3 individual, we determined that this was likely the
4 device that belonged to -- that most resembled the
5 device that would belong to the subject of the bank
6 robbery.

7 Q And this is based merely off of the returns that
8 came at the first stage that called for Google to only
9 return devices that it determined were inside that
10 geofence radius at the time of the crime; correct?

11 A That's correct. That is relying solely on that
12 Stage 1 data without evaluating any of the contextual
13 data that we received at Stage 2.

14 MR. SIMON: No further questions, Judge.

15 THE COURT: Cross?

16 MR. PRICE: Yes, Your Honor. Thank you.

17 CROSS-EXAMINATION

18 BY MR. PRICE:

19 Q Special Agent D'Errico, I just want to pick up
20 right where you left off. You didn't stop at Stage 1
21 in this case; correct?

22 A No, we did not.

23 Q You still got the Stage 2 data?

24 A That's correct.

25 Q And you got the Stage 3 data, as well?

D'ERRICO - CROSS

551

1 A That's correct.

2 Q Even though you were confident about your Stage 1
3 findings?

4 A We were confident in that was the device; however,
5 the note that was passed to the bank robber -- or
6 passed in the bank indicated that there may be
7 additional suspects involved with this crime. So, in
8 order to evaluate and investigate this crime fully, we
9 felt that we needed to look at the other devices that
10 could possibly be related to the investigation.

11 Q And, in fact, you ended up requesting account
12 detail information on three of those devices; correct?

13 A I did not. Detective Hylton did.

14 Q Thank you. Have you received any specific
15 training on geofence warrants?

16 A I have not received specific training. My
17 training comes in the form of my education with my
18 degree as a computer scientist, my education from
19 James Madison University with a bachelor's in computer
20 science, my training from Johns Hopkins University
21 with my master's in security informatics. This
22 training has provided me with the foundations to
23 understand these complex topics of wireless
24 communication and location data analysis. Pair that
25 with my independent study of patents issued by Google

D'ERRICO - CROSS

552

1 or obtained by Google and academic papers that discuss
2 how it's possible to derive approximate locations
3 using Wi-Fi access points and other reference material
4 as well.

5 Q But you haven't received any specific trainings on
6 geofence warrants?

7 A Google has not provided us any training on Google
8 geofence warrants.

9 Q And there aren't any Justice Department policies
10 on Geofence warrants, are there?

11 A I'm not aware of any policies, per se. We have
12 policies that talk about investigative techniques that
13 we can use, but nothing that focuses particularly on a
14 geofence warrant.

15 Q And, similarly, there aren't any Justice
16 Department procedures for obtaining geofence warrants,
17 are there?

18 A There's not procedures, but in working with CCIPS,
19 Computer Crimes and Intellectual Property Section of
20 the Department of Justice, we are able to obtain what
21 we call a "go by," which assists us in the language
22 needed to obtain a geofence search warrant.

23 Q A go by. Could you explain a little bit more
24 about that? Did you give one to somebody in this
25 case?

D'ERRICO - CROSS

553

1 A I don't recall that I provided any go bys in this
2 case. But a go by, for us, is a document that has
3 wording and points to remember to make sure we include
4 in a search warrant. For example, Google has specific
5 information that they need in order to process the
6 search warrant. They need a location point. They
7 need a radius or another shape to form that geofence.
8 They also need a time period in order to obtain the
9 records.

10 And then with the process that I understand has
11 been discussed between CCIPS and Google, we follow the
12 steps that they have laid out in order to work with or
13 in order to serve Google with this search warrant to
14 make sure that Google understands what we are
15 requesting and that we understand what we'll receive
16 back as part of that search warrant process.

17 MR. PRICE: Your Honor, we have long
18 suspected that the government used a template of some
19 sort in this case. We've asked for it repeatedly in
20 discovery and have not received it. And so I would
21 request that the government provide us with a copy of
22 this go by so that we can review it.

23 MR. SIMON: Judge, we have -- we didn't use
24 any Department of Justice go by in this case. I think
25 it's been pretty clear that any request from

D'ERRICO - CROSS

554

1 counsel -- and I'm not sure why this is coming up.
2 We've had numerous conversations in this case. There
3 have not been any discovery issues.

4 The questions were about whether Detective
5 Hylton used go bys, what go bys he used. We told them
6 as much as we could about that. He's going to
7 testify. To the extent that they're asking for some
8 Department of Justice go by, we've not declined to
9 give them anything less than what we have.

10 And they certainly have Detective Hylton's
11 federal search warrant. So I'm not sure what the go
12 by discussion is. Every search warrant signed by any
13 magistrate or any magistrate judge has some language
14 that is "in consultation with others."

15 So I'm not sure what the point of this
16 request is because we've given as much as we can give.

17 MR. PRICE: Your Honor, we believe that the
18 go by is important to this case. We think that the
19 sort of plug and play nature of some of these warrants
20 raises serious questions about the potential good
21 faith involved in the warrant process.

22 THE COURT: But wasn't the testimony that --
23 just that they didn't use a DOJ go by? Was access
24 given to a DOJ go by in this case to anyone?

25 THE WITNESS: Your Honor, I didn't swear out

D'ERRICO - CROSS

555

1 the warrant nor did I provide a go by to Detective
2 Hylton in this investigation.

3 MR. SIMON: Judge, testimony would reveal, as
4 defense counsel knows, that there was a federal search
5 warrant obtained by Detective Hylton prior to this
6 one, as well as, I think, another state search warrant
7 or two. They have those search warrants that
8 Detective Hylton obtained previously. Only one is
9 under seal that they don't have. So I'm not -- I'm
10 just not sure what we're getting at here, to be quite
11 honest.

12 THE COURT: I don't see the relevance if it
13 hasn't been used in this case and you have other
14 information that pertain to Detective Hylton. If
15 there's a sort of catch and replace process going on,
16 he wasn't involved. He's using what you have the
17 information about what he used.

18 MR. PRICE: It's also unclear to us where the
19 language in Detective Hylton's warrant, even if it
20 came from somebody else, originally came from.

21 THE COURT: I think that's just too far
22 afield. There's no evidence about his turning to a
23 DOJ go by. And any warrant is going to use language
24 from previous warrants; from another agency, from
25 another law enforcement program, from the state versus

D'ERRICO - CROSS

556

1 the federal. That's the nature of how warrants are
2 sworn out here. And if you have previous warrants
3 he's used, I think that's what you're entitled to.

4 MR. PRICE: Okay. Thank you, Your Honor.

5 BY MR. PRICE:

6 Q You wouldn't say you know more about geofence
7 warrants than Google; right?

8 A Google, the entity? No, I would not.

9 Q You don't have some unique knowledge that Google
10 doesn't about geofence warrants; right?

11 A No, not that I know of.

12 Q So, for example, you don't know when and why
13 Location History points are collected, do you?

14 A Yes, in particular, we do. We know that Location
15 History points can be collected based on the testimony
16 we heard earlier when a device is set up to opt in to
17 Location History.

18 And if I could go back to the prior question, I
19 don't know that Google is doing the analysis that we
20 do on our search warrants when we see this
21 information. And we learn a lot about this geofence
22 data and this Location History data by reviewing and
23 doing test observations and using this information in
24 the field to ultimately recover a fugitive or a phone
25 or somebody else that has committed a crime that's

D'ERRICO - CROSS

557

1 been in that area.

2 So from the analytical perspective, using it in
3 the law enforcement setting, I may have some more
4 knowledge than Google because that is not how Google
5 uses their data.

6 Q I'd like to show you an email that you sent to the
7 government about this issue.

8 A Okay.

9 Q Page 15, please.

10 THE COURT: Of what?

11 MR. PRICE: I'm sorry. This is not in
12 evidence, Your Honor. This is a set of emails that
13 the government turned over in discovery in
14 anticipation of Special Agent D'Errico's testimony.

15 THE COURT: All right.

16 So this is just to refresh his recollection?

17 MR. PRICE: Yes, Your Honor.

18 BY MR. PRICE:

19 Q Could you scroll down just a little bit.

20 So could you read the sentence that begins with
21 "Few observations"?

22 A "Few observations. They really don't go into how
23 they are determining location based on Wi-Fi, nor how
24 they draw their display radiuses. I don't think we
25 need to press them for it, but it would be nice to

D'ERRICO - CROSS

558

1 know."

2 Q And then a little bit further down on the page.

3 Could you read the highlighted line and the line right
4 before it?

5 A "Here are some other things that would be good for
6 Google to explain to fully understand this data. When
7 and why points are collected. For example, in our
8 case, there is a very frequent collection of Location
9 History." And that sentence continues.

10 Q So you had confusion, at least at this point in
11 time, about when and why Location History points were
12 being collected?

13 THE COURT: We don't know when this was
14 written, because you haven't put it on the record.

15 MR. PRICE: Sorry. This was written on
16 March 9, 2020.

17 A I don't think there is confusion as to when
18 Location History points are collected. I don't
19 understand exactly at a certain time why a location
20 point is collected, but I do understand that when the
21 device is set up appropriately, that Location History
22 will be collected.

23 Q Thank you. You understand how Google uses
24 location data for advertising; correct?

25 A I do understand some ways that Google uses it, not

D'ERRICO - CROSS

559

1 comprehensive.

2 Q And that this kind of advertising is, in fact,
3 very lucrative for Google?

4 A I don't know of Google's exact breakdown on their
5 location-based advertising.

6 Q You didn't prepare a slide on that for your CAST
7 report?

8 A As far as location-based advertising, no, I did
9 not. Advertising in general, yes. Advertising was
10 about 86 percent of Google's revenue.

11 Q And you prepared other slides specifically about
12 how they were using location data to conduct radius
13 targeting and store conversion visits; correct?

14 A Sure. Is there a slide we can refer to?

15 Q Yes, there is.

16 MR. SIMON: Judge, I'm not obviously going to
17 object. It's in the presentation. I would just note
18 that I didn't ask any direct third-party
19 doctrine-related questions.

20 THE COURT: I'm just going to let the record
21 be full. And the whole slide is in.

22 MR. SIMON: I understand, Judge.

23 BY MR. PRICE:

24 Q Can I draw your attention to Slide 40, and Slide
25 50, and Slide 40, 41 and 42?

D'ERRICO - CROSS

560

1 THE COURT: 40, 41 and what?

2 MR. PRICE: 42, Your Honor.

3 Q On Slide 40, you're demonstrating that Google is a
4 profitable company; correct?

5 A I'm demonstrating the revenues, and particularly
6 the point of this slide is to discuss the amount of
7 advertising revenues that comprises Google's entire
8 revenue as well as the main products that Google uses.
9 That was per their 10K reports and other information.

10 Q Thank you. And the main Google product that
11 drives its revenue is what?

12 A I believe it's advertising.

13 Q Thank you. Can we go to the next slide?

14 Here you have a slide on target ads to geographic
15 location, and you refer to something called radius
16 targeting; is that correct?

17 A That's correct. On Slide 41, it illustrates some
18 of the information on the Google ads help page, which
19 indicates that a company can draw a radius around a
20 location in order to target ads.

21 Q Thank you. Can we go to the next one. And here's
22 a slide about store visit conversions.

23 THE COURT: Slide about what? You really
24 are --

25 MR. PRICE: Store visit conversions. Sorry,

D'ERRICO - CROSS

561

1 Your Honor.

2 THE COURT: Okay.

3 A Yes, Slide 42 does talk about store visit
4 conversions similar to what Mr. McGriff talked about
5 earlier today.

6 Q Thank you. And this is a method of advertising
7 for Google based off of location?

8 A This is information that Google had on their
9 website, on their Google ads site.

10 Q And it's about advertising using location data;
11 correct?

12 A I believe these are metrics that they can provide
13 back to folks that place ads.

14 Q Thank you. Okay.

15 So advertising based on location data is not the
16 same thing as serving a geofence warrant on Google;
17 correct?

18 A Can you repeat that question, please?

19 Q Advertising based on location data is not the same
20 as serving a geofence warrant on Google?

21 A I don't know that I can draw that conclusion.

22 Q Well, when businesses place ads with Google, they
23 don't receive any location data about the users and
24 devices they're trying to target; correct?

25 A That's correct.

D'ERRICO - CROSS

562

1 Q And they can't ask for more data on where people
2 saw their ads, can they?

3 A I don't know what they can ask for.

4 Q They can't ask for more information about where
5 someone went 30 minutes after seeing an ad; correct?

6 A I don't know that information.

7 Q It's true for store visit conversions that Google
8 does not provide user location data directly to those
9 businesses?

10 A I believe Mr. McGriff testified today that they
11 don't provide location data to folks that -- companies
12 that do ads. I believe his testimony was that they
13 provide information in aggregate that no longer
14 resembles an individual's location.

15 Q Correct. And the same is true for radius
16 targeting, as well; right?

17 A The same -- can you repeat that?

18 Q Businesses who engage in radius targeting do not
19 get user location data as a result from Google?

20 A I'm only aware of Mr. McGriff's testimony today.

21 Q So the only reason the government was able to
22 obtain Location History data in this case from Google
23 was because they served them with a warrant; right?

24 A There -- well, there are a couple of factors.
25 There was Location History turned on, and there was

D'ERRICO - CROSS

563

1 Location History available. And the government served
2 a search warrant for those records which were held in
3 Sensorvault because the Location History was enabled
4 on the defendant's phone, which allowed Google to be
5 responsive to the search warrant that was obtained and
6 served by the government.

7 Q So Google wouldn't have compiled these records and
8 sent them to you if you didn't serve them with a
9 warrant; correct?

10 A They serve them in exigent circumstances. They
11 are responsive to law enforcement if we request, using
12 a search warrant or other legal process, for records
13 that they hold.

14 Q Have you ever obtained geofence data without using
15 a warrant?

16 A I take that statement back. Google is very
17 particular about that and does not allow it on
18 exigent. They will allow Location History on exigent
19 circumstances but still insist that we obtain a search
20 warrant on a geofence. Thank you for allowing me to
21 correct that.

22 Q Thank you. And the warrant here required Google
23 to do things with location data that it would not do
24 for any business seeking to advertise through Google;
25 correct?

D'ERRICO - CROSS

564

1 A I'm not aware of all of Google's business
2 practices.

3 Q Would Google conduct a geofence search for an
4 advertiser?

5 A Again, I'm not aware of Google's practices.

6 MR. SIMON: Judge, I think we -- I'm trying
7 to be fair about this and not stand up unnecessarily.
8 We've had two Google witnesses discussing this search
9 warrant. They've been asked questions. They've
10 answered them. The expert's been in the courtroom.
11 Why we're going down the path of asking FBI Special
12 Agent D'Errico about Google's internal business
13 practices, which everybody is going to agree Google is
14 the best evidence of that, I don't understand the
15 relevance and why we continue to go down this path
16 with this witness.

17 THE COURT: Sustained.

18 MR. PRICE: I'll move on.

19 BY MR. PRICE:

20 Q So you compare the area of the geofence warrant in
21 this case to the area of a hypothetical tower dump;
22 correct?

23 A Are you referring to a particular slide?

24 Q Yes. In your presentation, the one with the --
25 let me pull it up for you. This would be Slide

D'ERRICO - CROSS

565

1 No. 21.

2 A Could you repeat your question?

3 Q So, in your report, you compare the area of the
4 geofence warrant in this case to the area of a
5 hypothetical tower dump?

6 A Yes. We didn't actually obtain this tower dump,
7 but based on my training and experience with cell
8 phone towers, this is the best representation that I
9 could draw of the approximate coverage area of that
10 tower dump.

11 Q Would you agree with Google's statement in its
12 amicus brief in this case that a tower dump requires a
13 provider to produce only records of the mobile devices
14 that connected to a particular cell tower at a
15 particular time?

16 A Yes.

17 Q So you suppose the area of the tower dump in your
18 hypothetical based on three Sprint towers nearby the
19 bank; correct?

20 A That's correct. This is an example of a tower
21 dump for Sprint. We would also do a tower dump for
22 T-Mobile, Verizon, and AT&T, or any other carrier that
23 provided service to this area. And that drawing would
24 look different because they have towers in different
25 places.

D'ERRICO - CROSS

566

1 I chose Sprint in this case because Sprint is the
2 service provider for the defendant's phone.

3 Q So in your hypothetical, you suppose the area of
4 this tower dump based on three Sprint towers? That's
5 it.

6 A No, that's not it, actually. I drew this line
7 using many of the towers that are on this page,
8 because what we know about cell phone towers is that
9 they -- and this is information that we have learned
10 directly from the carriers because our training
11 includes training by network engineers at the
12 telephone companies, including Sprint, that when
13 they're planning out their network, they place towers
14 where they need coverage areas, and they do not place
15 towers where they do not need coverage area. And
16 their goal is to provide a certain level of customer
17 satisfaction, and that includes providing coverage
18 area. And that coverage area, it can be determined by
19 approximating maybe about 70 percent to the next
20 tower.

21 So in my drawing, in my estimation of the area of
22 the tower dump, I looked at each of the three towers
23 inside that I selected, and then I drew my line
24 approximately 70 percent to its nearest tower. And
25 that's how I approximated the area of the tower dump.

D'ERRICO - CROSS

567

1 Q So you looked at a map to see where the towers
2 were?

3 A Yes, I plotted the Sprint towers.

4 Q And then you drew a line around that area to
5 indicate the coverage of those towers?

6 A I drew the line to indicate the approximate
7 coverage of the areas. We don't know the exact
8 coverage of the areas, but based on a map and based on
9 my training and experience, this is an approximation
10 of the area that would be covered in a tower dump if
11 we were to do one for that area.

12 Q Thank you. And you can see on the satellite map
13 whether the area is an urban or rural area?

14 A I can tell if there are greenery or major roads or
15 even some secondary roads. I don't have a complete
16 listing of what is in each of these locations.

17 Q Okay. By looking at a map like this, you could
18 begin to approximate how many people might be affected
19 by the hypothetical tower dump here; right?

20 A It depends on many factors. It depends on
21 businesses. It depends on travel. That's not
22 something that I estimate.

23 Q But because of your training and experience as a
24 CAST team member, you would know that each tower has a
25 maximum number of users that it can handle at one

D'ERRICO - CROSS

568

1 time?

2 A That's true. There is a maximum at one time.

3 Q That's called a tower load?

4 A I don't have an exact phrase for it, but there is
5 an upper number of which there will be a point where
6 the tower will be saturated and no additional phones
7 would be able to make any communications off of that
8 tower.

9 Q Overloaded towers, they'll drop calls if there are
10 too many people trying to connect at the same time or
11 transfer them to another tower?

12 A It depends. So cellular communication is complex,
13 and there's lots of different factors at play. So
14 just because -- let me particularize this to Sprint.
15 If we were to ask Sprint for a tower dump, Sprint
16 would be able to provide calls that were originated
17 and ended in this area during the time frame that we
18 requested.

19 Q So in a hypothetical like this, of course dealing
20 with Sprint -- by the way, when you get tower dump
21 results from Sprint, those are only for people who use
22 the network for either phone calls or text messages;
23 correct?

24 A I believe I just answered that.

25 Q It doesn't include data transfers?

D'ERRICO - CROSS

569

1 A Sprint at the time of this would not have included
2 data.

3 Q So if you did a tower dump on just one of these
4 Sprint towers, you would have a rough idea of the
5 maximum number of users you could possibly get in an
6 hour period?

7 A I don't have a maximum number. I'm not aware of
8 what the maximum number is.

9 Q Mr. McInvaille testified yesterday that according
10 to your hypothetical, you'd probably net about a
11 thousand users per tower. Does that sound about right
12 to you?

13 A I don't have a frame of reference for that. I
14 would not be able to make an estimate on that.

15 Q Do you have any information that would contradict
16 Mr. McInvaille's estimation?

17 A I'm trying to recall back to tower dumps that I've
18 seen before. I just -- at this point I don't have a
19 good frame of reference.

20 Q So you don't have anything to contradict
21 Mr. McInvaille's conclusion?

22 A I don't. Not at this time.

23 Q Thank you.

24 So you're aware that Location History information
25 is determined differently than cell-site location

D'ERRICO - CROSS

570

1 information; correct?

2 A As it's -- can you rephrase that question?

3 Q You're aware that Google Location History
4 information is calculated differently than cell-site
5 location information?

6 A It can be, but it's not always. It depends on how
7 the cell carriers are determining locations for
8 phones. So a cell carrier could use the GPS sensor in
9 a phone to determine a location of the phone.

10 Q Could a cell carrier use the Wi-Fi networks, the
11 Wi-Fi fingerprinting that you described earlier in
12 your testimony?

13 A I don't think so. I don't think that's part of
14 the E911 Phase 2.

15 Q So it's calculated differently than just plain old
16 CSLI; right?

17 A Not all information is calculated differently.

18 THE COURT REPORTER: CSL?

19 MR. PRICE: CSLI, cell-site location
20 information. I apologize.

21 BY MR. PRICE:

22 Q Location History data is usually calculated using
23 GPS or Wi-Fi; correct?

24 A We see sources of GPS, Wi-Fi, or cell fairly
25 regularly.

D'ERRICO - CROSS

571

1 Q There are no cell records in this case; correct?

2 A That's correct, no cell records in this case.

3 Q And Google prefers to use Wi-Fi or GPS before
4 using cell data; correct?

5 A I don't know what their preferences are.

6 Q Did you listen to Mr. McGriff's testimony
7 yesterday?

8 A I did listen to it.

9 Q And he explained that cell-site location is less
10 preferred because it's less accurate, generally
11 speaking?

12 A I don't remember his exact testimony about that
13 point.

14 Q Okay. In any case, with GPS and Wi-Fi
15 fingerprinting, there are no cell phone towers
16 involved; correct?

17 A That's correct.

18 Q Okay. So that means there's no way to get
19 Location History data just by identifying nearby cell
20 phone towers?

21 A In this case, there were no Location History
22 records obtained using exclusively or primarily the
23 cell phone tower. I don't know that the cell phone
24 tower was not included in the calculation for Wi-Fi or
25 GPS, but I know there were no records marked cell,

D'ERRICO - CROSS

572

1 which to me would indicate that the cell tower would
2 be the primary sensor used to determine Location
3 History.

4 Q So you have to rely on Google to determine which
5 devices were present. There's no way to identify a
6 couple of towers nearby; correct?

7 A There is a way to identify a couple of towers
8 nearby, and we could have obtained a tower dump to
9 obtain that information. In this case, we did not.

10 Q Let me rephrase. I mean that Google will not
11 respond to a request for Location History information
12 based on the location of a cellular tower; right?

13 They testified earlier today that they do not index
14 their Location History database in that manner.

15 A I'm sorry. I'm not understanding the question.

16 Q Google testified earlier today that they do not
17 index their Location History database by location.
18 They index it by user.

19 A Is that a question?

20 Q Was that your recollection of Google's testimony,
21 as well?

22 THE COURT: How did they hold stuff in the
23 Sensorvault. That's the testimony he's talking about.

24 THE WITNESS: Yes, I understand that -- I
25 believe it was Ms. Rodriguez that said that they have

D'ERRICO - CROSS

573

1 their Sensorvault data indexed by user, whether it was
2 device ID or Google account. I believe it was indexed
3 by Google account.

4 BY MR. PRICE:

5 Q We can turn to Google's amicus, as well. Google
6 explains -- I believe this is page 14 of Google's
7 amicus brief, Defense Exhibit 2. Google says, "The
8 steps necessary to respond to a geofence request are
9 thus quite different from and far more intrusive than
10 responses to requests for a CSLI or tower dumps"?

11 A Which page is that on?

12 Q This is page 14 of the amicus brief. It's the
13 highlighted language or will be highlighted in a
14 moment.

15 A I see that paragraph, yes.

16 Q You don't disagree with that, do you?

17 A That it is more intrusive? I don't believe that
18 it is more intrusive.

19 Q They go on to explain, they say, A tower dump
20 requires a provider to produce only records of the
21 mobile devices that connected to a particular cell
22 tower at a particular time. But because Location
23 History is different, Google has no way to identify
24 which of its users were present in the area of
25 interest without searching the Location History

D'ERRICO - CROSS

574

1 information stored by every Google user.

2 A I see that paragraph, yes.

3 Q You disagree with that?

4 A So, I don't -- it's hard for me to compare because
5 I don't know exactly how the cell phone carriers store
6 their data. If their data is stored in a central
7 database, then they have to search every record in
8 their database to obtain the tower dump records. So I
9 don't know that I have enough information to fully
10 evaluate that.

11 Q So you don't have enough information to contradict
12 their statement that says Google has to search across
13 all Location History journal entries -- I'm sorry.
14 We're on page 12 to 13, the bottom page 12 to the top
15 of page 13. Instead, Google has to search across all
16 Location History journal entries to identify users
17 with potentially responsive data --

18 THE COURT: Don't read it too fast.

19 BY MR. PRICE:

20 Q -- in order to comply with the request.

21 A Do I disagree with that? No. They need to do a
22 search of the Sensorvault database for locations that
23 are responsive to the geofence.

24 Q And you don't have any information to contradict
25 their next statement that Google has to run a

D'ERRICO - CROSS

575

1 computation against every set of coordinates to
2 determine which Location History records match the
3 time and space parameters of the warrant?

4 A I don't have any information to contradict that.

5 Q Do you know how many users had Location History
6 enabled when Google executed the geofence warrant
7 here?

8 A I only know the information that was provided by
9 Mr. McGriff and his affidavits, which I believe he
10 talked about tens of millions.

11 Q That's right. Google says that roughly one-third
12 of active Google users had Location History enabled on
13 their accounts, and that that translates to numerous
14 tens of millions of Google users. You don't disagree
15 with Google about that, do you?

16 MR. SIMON: Judge, I'm going to object again
17 to, I think, questions that are basically attempts to
18 testify. Asking this witness who says he has no
19 personal knowledge of Google's internal practices, the
20 Court has already sustained that objection. I think
21 we should move off, Judge, based on relevance this and
22 also personal knowledge, asking questions about
23 Google's internal process.

24 This witness is going to consistently say
25 Google's got the best answers on their internal

D'ERRICO - CROSS

576

1 process.

2 MR. PRICE: We can move on, Your Honor.

3 THE COURT: Okay. Good.

4 BY MR. PRICE:

5 Q Regardless of the ultimate number, they're
6 searching everybody with Location History enabled at
7 the time; correct?

8 A Again, I have to defer to Google on that. They
9 conduct the query of their database.

10 THE COURT: That's actually not moving on.

11 MR. PRICE: Okay. We can move on to the next
12 part.

13 BY MR. PRICE:

14 Q Records from a Sprint tower dump don't show every
15 device that's in the area; correct?

16 A No. Records from a Sprint tower dump show the
17 devices that were making calls or receiving calls in
18 that area that were on the Sprint network.

19 Q So, in addition to being on the Sprint network, as
20 we just discussed a second ago, a user would have to
21 be making a phone call, receiving a phone call,
22 sending or receiving a text message to show up in that
23 tower dump with Sprint?

24 A Yes, with Sprint. There has to be a network
25 transaction occurring.

D'ERRICO - CROSS

577

1 Q I want to get your take on whether you agree with
2 Google here. They say, on page 9, of their amicus
3 brief --

4 THE COURT: Wait a minute. Didn't we just
5 have an objection to this, that this witness can't say
6 whether or not this is the best answer that Google
7 does? So you can go through the whole brief. He's
8 already said to you he can't agree or disagree because
9 Google knows the answer, and he doesn't. Am I wrong
10 about that? Well, it doesn't matter, because I'm
11 saying you can't ask it.

12 MR. PRICE: Yes, Your Honor.

13 BY MR. PRICE:

14 Q In fact, law enforcement did not get a tower dump
15 in this case; correct?

16 A That's correct, we did not get a tower dump.

17 Q And it wouldn't have been useful, at least for
18 Sprint, if the suspect did not make a phone call,
19 receive a phone call, send or receive a text message
20 during this time?

21 A If he did not, but he did.

22 Q A tower dump would not have registered him if he
23 did not?

24 A That's correct. If he did not make a call, the
25 tower dump would not register that. If he did not

D'ERRICO - CROSS

578

1 make a call or a text or receive a call or a text.

2 Q And even if the suspect did show up in a tower
3 dump in this case, you wouldn't have any way of
4 identifying that suspect based solely on the tower
5 dump in one instance?

6 A That's incorrect. So our investigative plan would
7 have been to compare the tower dump to a list of blue
8 Buicks, owners of blue Buicks, that we were prepared
9 to obtain from the Department of Motor Vehicles.
10 Whereas, one tower dump alone sometimes is not enough,
11 we did have another data set to compare it to even if
12 it was not a tower dump.

13 So in that case, this case, we were prepared to
14 obtain data from the Department of Motor Vehicles of
15 blue Buicks, the same vehicle that was reported to us
16 by a witness being behind the Journey Christian
17 Church, the suspicious vehicle, and compare the
18 registered owners of those vehicles to the phone
19 numbers in the tower dump.

20 Q So you're saying there was another way you could
21 have worked this case without doing a geofence
22 warrant?

23 A What I'm saying is there's many investigative
24 techniques out there, and the investigative technique
25 that we used first was the Google -- or that we used

D'ERRICO - CROSS

579

1 prior to using the tower dump was the Google geofence.

2 Q So there was another way you could have done this,
3 but you chose not to?

4 A I didn't make that decision.

5 Q The government chose not to?

6 A I think I answered that question. The first
7 technique that we decided to use or the technique we
8 decided to use earlier was a Google geofence. And if
9 that had not had results, that we did have other
10 investigative techniques that we could have used.

11 Q Thank you. You said you used 2703(d) orders to
12 obtain tower dumps. Is that still true?

13 A Yes, it is.

14 Q You don't get warrants for those?

15 A No, we do not.

16 Q Not even after the Supreme Court's decision in
17 *Carpenter*, 2018, requiring a warrant for cell phone
18 location -- historical cell phone location
19 information?

20 A No, it is not required. *Carpenter* does not
21 comment on tower dumps, nor does it comment on
22 location data less than seven days.

23 Q So it's your practice not to get warrants for
24 tower dumps?

25 A There is discretion that a 2703(d) can be used for

D'ERRICO - CROSS

580

1 a tower dump or a search warrant can be used.

2 Q You said you don't tell companies how to conduct a
3 search in the case of a tower dump, for example?

4 A I am not an expert in their internal systems. We
5 provide a search warrant with the information that we
6 are requesting on their records. They conduct the --
7 they obtain those records, however they will, and they
8 provide those to us.

9 Q So you've never seen a search warrant for a tower
10 dump that specifies the towers to be searched?

11 A Sometimes we do specify the towers to be dumped
12 because we have information that those towers would
13 cover the area in question.

14 Q That is in your hypothetical, for example, with
15 Sprint?

16 A Those are the towers that I likely would have
17 searched or requested be searched for a tower dump.

18 Q Okay. So when Google produces data in response to
19 a geofence warrant, they include this display radius;
20 correct?

21 A That's correct.

22 Q And in his first declaration, Mr. McGriff wrote
23 that a radius -- let me just pull that up. It's
24 Defense Exhibit 21, Mr. McGriff's first declaration at
25 page 9. And Mr. McGriff wrote, "A radius around a

D'ERRICO - CROSS

581

1 user's estimated location that shows the range of
2 location points around the stored Location History
3 coordinates that are believed to contain, with 68
4 percent probability, the user's actual location."

5 A I see that in paragraph 25.

6 Q And you understand that 68 percent to be Google's
7 confidence that somebody is within that display
8 radius?

9 A I believe that is exactly what it says. That if
10 they see those conditions 100 times, 68 percent of the
11 time that it will be inside that geofence or, excuse
12 me, inside that map display radius.

13 Q And 68 percent is the industry standard for this;
14 right?

15 A 68 percent is approximately the industry standard,
16 yes.

17 Q But regardless of that 68 percent confidence, if a
18 user's estimated location falls within the radius of
19 the geofence, then Google treats that user as falling
20 within the scope of the geofence; correct?

21 A If the center point of the Location History record
22 is within the geofence, then Google does provide it
23 responsive to a search warrant.

24 Q Even though there's no greater probability that
25 the user is in the dead center of that display radius

D'ERRICO - CROSS

582

1 as opposed to off by the edge?

2 A That's correct. Google doesn't provide a
3 percentage that it's going to be in the northwest
4 corner versus the northeast corner versus the south of
5 that map display radius.

6 Q And the map display radius often extends the
7 geofence as drawn?

8 A I don't agree with that characterization. I don't
9 think it often extends beyond on our Stage 1 data.

10 Q It does -- it extends beyond the geofence in this
11 case; correct?

12 A There are select points that extend beyond but
13 not -- nowhere near a majority of points.

14 Q Okay. But that fact, the fact that the display
15 radius exceeds the geofence circle, means that false
16 positives are possible when you conduct a geofence
17 warrant; correct?

18 A It is -- I believe Google testified to it. They
19 are making a good faith effort to determine the
20 location of that device. Their technology is not
21 100 percent, but they are providing a good faith
22 effort in order to determine the location of that
23 device.

24 Q So you agree with Google, false positives are
25 possible?

D'ERRICO - CROSS

583

1 A False positives are possible.

2 Q Was there a false positive in this case?

3 A I don't know.

4 Q Perhaps one of the three that made it all the way
5 to Stage 3?

6 A Could you -- which one would you like to discuss?

7 Q Let's take a look at your report on page 31. The
8 user with device ID 2, ending in 2662?

9 A 907512662?

10 Q Correct. That was one of the three device IDs
11 that made it all the way to Stage 3; correct?

12 A That's correct.

13 Q Can we look at page 34 of your report. This is
14 the Stage 2 data plotted for that device ID; correct?

15 A That is correct.

16 Q And there's only one point in all of that data
17 that falls within the geofence as drawn; correct?

18 A There is one center point that is in the geofence.
19 There is another GPS point that has its display radius
20 overlapping into the geofence.

21 Q And when you were looking at this data, did you
22 consider the time intervals between data points?

23 A Yes, I did.

24 Q And were you able to determine from that time,
25 from those intervals, whether this individual was

D'ERRICO - CROSS

584

1 likely walking or driving?

2 A I don't remember my exact assessment. Looking at
3 this data now, it appears that the person was
4 traveling at vehicle speeds.

5 MR. PRICE: And can we please bring up
6 Defense Exhibit 5.

7 BY MR. PRICE:

8 Q This is the three-paths video that Mr. McInville
9 created detailing the Stage 2 data for three of the
10 individuals caught up in this geofence. This is the
11 user that we have referred to as Mr. Blue. I'd like
12 to play the video for you so you can see the trail of
13 his data as it goes and touches inside of that
14 geofence.

15 (Video is played.)

16 Q So based on the time lapse in between those points
17 and the fact that they are almost all on roads, you
18 were able to determine that that person was likely
19 driving?

20 A Well, in that case, I can't eliminate that the
21 person ducked into that parking lot, dropped somebody
22 off, and then continued north on Price Club Boulevard.

23 Q Can we take a look at Price Club Boulevard there
24 and ZOOM back for a second.

25 So, somebody driving along Price Club Boulevard

D'ERRICO - CROSS

585

1 from the south of our screen up to the north would
2 have to drive on the road; correct?

3 A Yes.

4 Q They couldn't drive through the trees and right
5 over the church and onto the road on the other side;
6 right?

7 A That's correct. If you're driving in a vehicle,
8 generally you need to stay on the roads.

9 Q So, based on your training and expertise, looking
10 at this data, isn't it likely that this person was
11 driving on the road next to the geofence?

12 A Again -- well, it appears that they approach, but
13 I cannot rule out that that person did not turn into
14 the parking lot, drop somebody off, and then resume
15 travel on that road.

16 Q So if false positives are possible, false
17 negatives are possible, too; correct?

18 A Yes, they are.

19 Q Okay. So you testified that the effective
20 geofence radius here, that was your words, "effective
21 geofence radius," was 150 meters?

22 A That's the radius that we requested from Google,
23 and they were responsive. All points fell withinside.
24 All of the center points for the Location History data
25 fell within that geofence.

D'ERRICO - CROSS

586

1 Q So that's the requested geofence radius; correct?

2 A Yes, that's the geofence radius.

3 Q The effective geofence radius would have to take
4 into account the display radius for all the different
5 location points; correct?

6 A It is possible that that device is outside the
7 geofence. It is also possible that point is inside
8 the geofence. I don't have enough information to
9 evaluate that.

10 Q The display radius means that the geofence, when
11 it is run, as we just discussed, may pull in people as
12 a false positive who were not, in fact, inside that
13 geofence; correct?

14 A Yes, it's possible.

15 Q So they would be, then, outside the geofence and
16 mistakenly labeled as inside; correct?

17 A Yes, that's possible.

18 Q So if it is pulling in people who are outside of
19 the geofence as drawn, the effective range of that
20 geofence must be larger than the geofence as drawn?

21 A The person could be outside the geofence. We just
22 don't have enough information to evaluate exactly
23 where they are.

24 MR. PRICE: Could we look at Slide 22,
25 please. Slide 20, my apologies.

D'ERRICO - CROSS

587

1 BY MR. PRICE:

2 Q So, in this case, the one user who had a display
3 radius of 387 meters based on Google's data, there was
4 a 68 percent chance that that person was somewhere
5 inside that very large blue circle; correct?

6 A That's correct based on Google's testimony. There
7 is a 68 percent chance that they're inside that
8 circle.

9 Q So the effective range of this particular geofence
10 warrant exceeded the geofence as drawn by, what was
11 it, 290 meters?

12 A I can't agree with that conclusion because we
13 don't know the actual location of the device. That
14 bubble covers the entire geofence, and that device
15 could be inside the geofence. It could be outside but
16 it could also be inside. So I can't really evaluate
17 that because I don't have enough information to
18 determine if that device was actually inside or
19 actually outside. And that's the thing about this
20 data. They are estimated locations for us, so that we
21 can determine the estimated location of the device in
22 order to move forward our investigation.

23 Q As you testified earlier, it's just as likely that
24 someone is at the center of that big blue circle as it
25 is that they are right by the edge; correct?

D'ERRICO - CROSS

588

1 A Google doesn't provide any indication where in
2 that display radius they are. They just provide the
3 display radius, the center point, and say it's a
4 68 percent chance that they are in that area.

5 Q So there's a 68 percent chance that, say, the user
6 was standing at the edge of that circle 290 meters
7 outside the geofence?

8 A No, I think your math is incorrect. What Google
9 is saying is there is a 68 percent chance that they
10 are inside that geofence. They're not saying that
11 there's a 68 percent chance that they are at the
12 intersection of Hull Street and Price Club Boulevard,
13 and they're not saying there's a 68 percent chance
14 that they're down in the cul-de-sac at the bottom.
15 They're saying there's a 68 percent chance that the
16 device is inside that geofence.

17 And that is, yep -- and that's what they have
18 provided to us.

19 Q That's fine. Thank you. You don't know exactly
20 why the display radius was so big for this particular
21 user, do you?

22 A I don't know the exact reasons, but based on my
23 knowledge and analysis of previous Google location
24 records, this indicates that there was some travel,
25 some motion on this device, because the point prior to

D'ERRICO - CROSS

589

1 this large radius was the exact same latitude and
2 longitude as this large point, and the first point was
3 also a much smaller radius.

4 Q So there could be any number of reasons why that
5 one point generated such a large display radius here?

6 A I'm aware of that reason for it, but there may be
7 others, yes.

8 Q And you don't know exactly how Google calculates
9 their display radius; correct?

10 A No, I don't. That's a Google question.

11 Q That's sort of their secret sauce, isn't it? It's
12 proprietary is what I mean to say.

13 A I don't know. They have not provided it to us.

14 Q When you use Google's API to estimate your display
15 radius for the drive test that you do, you don't get
16 to see the calculations that Google does. You just
17 send it off to them; correct?

18 A That's correct. I just send the information to
19 Google, and they respond back with a latitude and
20 longitude and a display radius.

21 Q That's because their algorithm, their way of
22 calculating that display radius is considered
23 proprietary?

24 A I don't know if they've marked it proprietary.
25 I'm not familiar with their internals.

D'ERRICO - CROSS

590

1 Q But you do know that the display radius can be
2 quite large. In fact, much larger than 387 meters.

3 A I have seen large display radiuses before, yes.

4 Q And the largest one in this case was 1,842 meters;
5 correct?

6 A I don't know off the top of my head, but I see a
7 large one in Stage 2 data of 1,842.

8 Q Any others?

9 A Sure. There's another one that's 1,797 meters.

10 Q And there is one that is 1,838 meters, too;
11 correct?

12 A Yes. Those three points out of the 680 are large.

13 Q In fact, there were three others with display
14 radii exceeding 1,000 meters here. There are four
15 points.

16 A In see four points listed on Slide 26. That's
17 what I'm referring to when I look at the large map
18 display radius.

19 Q Okay. Thank you. So, to sum up, you don't know
20 how big the display radius is going to be for any
21 given point before you do the geofence warrant;
22 correct?

23 A That's correct.

24 Q You don't know how the display radius is actually
25 calculated?

D'ERRICO - CROSS

591

1 A That's correct.

2 Q You don't know how far beyond the geofence it's
3 going to extend?

4 A That's correct.

5 Q And you don't know how many hits you're going to
6 get in Stage 1?

7 A That's correct. That's why we ask Google for the
8 information with the search warrant.

9 Q You haven't seen Google's policies on responding
10 to geofence warrants?

11 A I'm assuming those are internal policies. I have
12 not seen any.

13 Q So you don't know how big a radius is acceptable
14 to Google?

15 A These are -- I'm not aware of Google's internals.

16 Q And if you get Stage 1 data, you're not certain
17 how many users Google is going to provide Stage 2 data
18 for; correct?

19 A Google provides Stage 2 data for the users that we
20 request following the narrowing process.

21 Q There's no fixed number of users that you have to
22 narrow it down by between Stages 1 and 2; right?

23 A Not that I know of.

24 Q So, it's sort of up to -- it's a bit of a
25 negotiation with Google about what is acceptable in

D'ERRICO - CROSS

592

1 terms of Stage 2 returns?

2 A Well, it's written pretty particularly in the
3 search warrant that the government -- I believe it's
4 will attempt to narrow. And that is that's part of
5 the process.

6 Q And if they attempt and Google doesn't find it
7 sufficient, what happens?

8 A Google will come back to us initially, and they
9 may say -- or they may want to have a discussion on
10 what the circumstances are. I was not part of that in
11 this case. I can't speak to what happened in this
12 case as far as that.

13 Q And the same sort of discussion process would
14 happen between Stages 2 and Stages 3; correct?

15 A I know that based on the testimony of
16 Ms. Rodriguez today.

17 Q And the geofence warrants that you've dealt with?

18 A Generally, when we ask for the device IDs, we have
19 narrowed it down sufficiently and Google provides
20 those.

21 Q So you've had these discussions with Google
22 before?

23 A No, because we have -- Google has been responsive
24 to the geofence warrants that I've submitted.

25 Q Okay. Thank you very much.

D'ERRICO - CROSS

593

1 A Yes.

2 MR. PRICE: No further questions, Your Honor.

3 THE COURT: All right. Is there any
4 redirect?

5 MR. SIMON: Judge, I'd ask three questions
6 and --

7 THE COURT: Okay. And then we'll take a
8 recess.

9 REDIRECT EXAMINATION

10 BY MR. SIMON:

11 Q Can we pull up Government's Exhibit 1, Slide 24.

12 Special Agent D'Errico, you were asked about a lot
13 of plot points, none of which -- the large display
14 radius had nothing to do with the defendant's account;
15 correct?

16 A That's correct.

17 Q And if we're talking --

18 THE COURT: Okay. I don't know why. I'm
19 really having trouble. Move the microphone up so it
20 sort of captures you.

21 MR. SIMON: I didn't fix the mic, Judge.
22 You're right.

23 BY MR. SIMON:

24 Q Special Agent D'Errico, the discussion about the
25 display radius for that one point that was considered

D'ERRICO - REDIRECT

594

1 relatively large, that was a different user's account,
2 not the defendant's account; correct?

3 A That's correct.

4 Q And if we're talking about the defendant's
5 account, we would be looking at Slide 24; right?

6 A That's correct. Slide 24 shows the initial Stage
7 1 data for the defendant's phone.

8 Q And so if we're talking about that 68 percent, I
9 want to be clear about it, the 68 percent number
10 relates to the fact that the individual to Google's
11 best estimate based on its technology would be within
12 that blue display radius; right?

13 A That's correct, that blue display radius. And you
14 can see some of these points in yellow are right on
15 the edge of those display radiuses. So they can be
16 anywhere in there, but these points are consistent
17 with the defendant being in those locations.

18 Q Okay. And with respect to the search warrant and
19 what the search warrant requests from Google, it asks
20 Google to send us back who you have determined is
21 within the red geofence radius; right?

22 A That's correct.

23 Q Now, the accuracy of Google points, you've done
24 some testing we talked about; right?

25 A Yes, I have.

D'ERRICO - REDIRECT

595

1 Q What have you determined about the accuracy of
2 Google's location points if you've come to a
3 percentage yourself in terms of your own location
4 points?

5 A I don't have a particular percentage, but what
6 I've learned is that sometimes Google is a little too
7 conservative with their display radius, particularly
8 in Wi-Fi points, and that sometimes Google misses the
9 mark by several meters. Single digit meters. So the
10 point would fall outside of the display radius, but it
11 is still in the immediate vicinity of the area.

12 So, for example, if a point -- from this data,
13 what we're seeing is that the device is in this area.
14 This is not saying -- it's not a miss such that the
15 device is in California or Illinois or even north of
16 Richmond. When we have seen misses by the Google
17 location data, it's by very small amounts, especially
18 in areas like this that have Wi-Fi coverage. And that
19 actual location might be just outside of the map
20 display radius that they show.

21 So, whereas Google does aim for 68 percent inside,
22 there is a percentage that is right outside, just
23 outside that display radius based on the observations
24 that I've had.

25 Q When you say "conservative," can you just explain

D'ERRICO - REDIRECT

596

1 what you mean by that word "conservative"?

2 A Yes. That Google has made -- I'm sorry. Maybe
3 that's not the right word. Google has made that
4 display radius a little smaller than it should have
5 been. And that if Google increased its map display
6 radius by 10, 20 meters, that point would fall inside
7 that new display radius. So what I'm saying is when a
8 point misses, it's outside the 68 percent, it's
9 generally still in that area. It's a near miss, not a
10 flagrant miss of putting a device in Washington, D.C.,
11 or even the other side of Chesterfield County.

12 Q Okay. And then, last question, looking at Slide
13 28, the supplemental records for the defendant's
14 phone, there was some talk about the large display
15 radiuses at the second stage when we've moved outside
16 of the geofence and asked for records -- for these
17 additional records for these devices.

18 Looking at, again, box 1, that's one of those
19 large points, 1797 meters. Two minutes before, it's
20 104. Again, what is that indicative of based on your
21 training and experience?

22 A That's indicative of travel. So in boxes 1, the
23 two points have the exact same latitude and longitude.
24 So there's a single marker in the middle. And what
25 happens is that first point is a hundred-meter radius,

D'ERRICO - REDIRECT

597

1 104-meter radius. And for some reason when the phone
2 goes to take the next measurement, which is about two
3 minutes later at 3:55, for some reason unknown to me
4 the center point is not updated to a new latitude and
5 longitude.

6 But what happens, I believe, is based on the
7 sensors in the phone, the accelerometer, which
8 determines speed, and the gyroscope, which determines
9 tilt, is that using those additional signals, it can
10 estimate approximately how far away that device is.

11 So we still deem these accurate even though they
12 are a larger circle. It may not be as precise, but
13 it's still accurate as to the device is somewhere in
14 that area.

15 MR. SIMON: No further questions, Judge.

16 THE COURT: So, I'm going to ask one question
17 I really don't want to open up a can of worms, but I
18 just want to be clear. If Google is saying in the
19 display radius, there's a 68 percent chance that the
20 device is in that radius, what does the other
21 32 percent reflect? That it's not there?

22 THE WITNESS: That the device would be
23 outside of that display radius. And in my experience
24 with testing this data and doing my own measurements,
25 a lot of those points are what I would characterize as

D'ERRICO - REDIRECT

598

1 near misses, which means still in the general area,
2 but maybe they're a football field away. Maybe
3 they're 100 meters away. Maybe they are 20 meters
4 away. But they are still in that general area. And
5 we are not looking at folks that are in Washington,
6 D.C. or other geographic areas. That's been my
7 experience with this data.

8 THE COURT: All right.

9 MR. SIMON: Nothing further, Judge.

10 THE COURT: Can this witness be excused?

11 MR. SIMON: From the United States, Judge,
12 yes.

13 MR. PRICE: For the defense, yes, Your Honor.

14 THE COURT: All right. Thank you, Special
15 Agent, for your time.

16 THE WITNESS: Thank you.

17 (The witness was excused from the witness
18 stand.)

19 THE COURT: We're going to take a recess.
20 I'd like to keep it just to 6:15. That's only 12
21 minutes, but I am being the antithesis of an Eastern
22 District judge. I have had trials here where somebody
23 told me at lunch to cut my witness list in half
24 because I was taking too long. So I really just want
25 you all to get your job done, but also be mindful of

1 everybody's time, especially with asking repetitive
2 questions. All right. Okay.

3 (Recess taken from 6:03 p.m. to 6:15 p.m.)

4 MR. SIMON: DO we need to put him under oath,
5 Judge?

6 THE COURT: Yes, of course.

7 I was going to say we're going to put him
8 under oath. Detective Hylton, we'll ask you to stand
9 for that.

10 I'm also going to say that it's been a long
11 day, and we cannot go any more than an hour without a
12 break. So if you guys understand that, there are a
13 lot of people here who are very tired. And so I'm
14 going to accommodate them, of course, as I have you
15 perhaps a little too much. So one hour per break.
16 And it really would be nice if we ended in an hour.

17 All right.

18

19 JOSHUA HYLTON, called by the United States, first
20 being duly sworn, testified as follows:

21

22 DIRECT EXAMINATION

23 BY MR. SIMON:

24 Q Detective Hylton, can you state your name for the
25 record, please.

HYLTON - DIRECT

600

1 A Yes, sir. It's Joshua Hylton, spelled
2 H-Y-L-T-O-N.

3 Q Okay. And you're a Task Force Officer with the
4 FBI; right?

5 A That's correct.

6 Q And which task force are you with?

7 A The Violent Crimes Task Force in Richmond,
8 Virginia.

9 Q How long have you been there?

10 A Since December of 2016, sir.

11 Q And you've been in law enforcement since 2011;
12 right?

13 A That's correct.

14 Q With Chesterfield?

15 A Yes.

16 Q Police Department?

17 A Yes, sir.

18 Q Okay. Now, when you started your career, what
19 kind of crimes did you investigate?

20 A Initially, as a patrol officer, just the average
21 patrol-type crimes, larcenies, things of that nature,
22 assaults, vehicle infractions. And, I believe, in
23 August 2015 I was assigned to our Persons Unit who
24 investigates violent crimes to people.

25 THE COURT: Did you say "Persons Unit"?

HYLTON - DIRECT

601

1 THE WITNESS: Yes, ma'am, in Chesterfield.

2 So that's what we called it at the time. Now
3 we've broken it up into sections of robbery and
4 homicide.

5 When I was first assigned to the unit, I
6 investigated homicides or suspicious deaths, missing
7 persons cases, natural deaths, accidental deaths,
8 robberies to the person, whether it be a street
9 robbery or what we call a drug rip robbery, or, of
10 course, a commercial robbery, as well.

11 THE COURT: Drug rip?

12 THE WITNESS: Yes, ma'am. Essentially, a
13 drug deal that has gone bad for one party or the other
14 where someone will attempt to purchase whatever drug
15 it might be, and then they get robbed. I apologize
16 for the term.

17 Commercial robberies, such as bank robberies,
18 major assaults, shootings, rapes, things of that
19 nature.

20 Q How many robberies have you investigated?

21 A It's hard to say, as a primary investigator, but
22 at least well over 100.

23 Q Okay. Did any of those robberies involve alleged
24 conspiracies?

25 A Yes, sir.

HYLTON - DIRECT

602

1 Q Have you gotten any training in your role as a law
2 enforcement officer?

3 A Yes, sir.

4 Q What's that?

5 A Well, the Chesterfield County Basic Police
6 Academy, which lasted over seven and a half months,
7 approximately two months of field training with
8 another officer or more experienced officers.
9 Likewise, when I became a detective, we had a period
10 of training where we had to be evaluated by another
11 investigator for different cases that we were working
12 for approximately a month or so.

13 Various training that's come up over the years
14 whether it be search warrant preparation, search
15 warrant execution, various legal updates, things of
16 that nature. Electronic data collection, examination,
17 things like that.

18 Q So, now going to sort of the practical piece, have
19 you obtained search warrants in the past?

20 A Yes, sir.

21 Q Okay. How many would you say? And if you can't
22 estimate that, sort of what types of search warrants
23 have you obtained?

24 A It would be hard to quantify that. Somewhere
25 between 50 and 100 easily, I guess. So, social

HYLTON - DIRECT

603

1 media-type search warrants; Instagram, Facebook, live
2 pings where we're trying to figure out where a suspect
3 is or a subject is based on their cell phone location.
4 Of course, the Google search warrants or geofence
5 search warrants, search warrants involving DNA
6 collection, tower dump search warrants, residential
7 search warrants, vehicle search warrants, search
8 warrants where I need to take a picture of a person's
9 body that could have been a suspect of a rape or
10 something of that nature. Historical-type search
11 warrants.

12 Q Is that historical location?

13 A It could be historical location, that's correct.

14 Q Okay. Now, getting to the particular type of
15 warrant in this case, a geofence warrant, have you
16 obtained any geofence warrants in the past?

17 A I have.

18 Q How many prior to this case?

19 A Three prior to this investigation.

20 Q And were all of those signed by judges?

21 A Yes, sir.

22 Q Okay. What type? Was it federal or state?

23 A The first geofence warrant I acquired was actually
24 in this district. The Honorable Judge David Novak, I
25 believe. And then the two subsequent search warrants

HYLTON - DIRECT

604

1 were acquired by Chesterfield Circuit Court judges.

2 Q Okay. Now, prior to getting the search warrant in
3 this case, did you consult with prosecutors about
4 geofence warrants?

5 A With the prior warrants, yes.

6 Q What, if anything, did they tell you about the
7 appropriateness of getting these types of warrants as
8 a legal matter?

9 MS. KOENIG: Judge, objection. That is a
10 legal conclusion which we have no witness to be able
11 to testify about what advice was given, and that is
12 not the appropriate question to be given in this case.
13 This Court is to determine whether this warrant was
14 valid.

15 MR. SIMON: Judge, it goes to the issue of
16 good faith and, I think, hearsay as to what he was
17 told or the advice that he's gotten about the
18 propriety of these warrants is relevant.

19 THE COURT: Why don't you just ask one
20 question in the negative? Have you ever been told
21 it's not legal?

22 MR. SIMON: Okay.

23 BY MR. SIMON:

24 Q Have you ever been told it's not legal to get
25 these?

HYLTON - DIRECT

605

1 A No, sir.

2 Q Now, the previous warrants that you obtained,
3 these previous geofence warrants, were they
4 substantially similar to the one you obtained in this
5 case?

6 A They were mostly similar, that's correct. A few
7 of them had more locations because of the more
8 robberies to investigate.

9 Q Did they generally use the 150-meter radius?

10 A All but the search warrant that's sealed
11 currently.

12 Q Okay. Now, prior to getting the search warrant in
13 this case, did you receive any directive from
14 leadership in your office at Chesterfield P.D.?

15 A I did, from my lieutenant and the courts.

16 Q Okay. What, if anything, did they tell you about
17 where to go get your search warrant in this case?

18 A If possible, we would acquire our search warrants
19 through a magistrate judge. Sorry. Not a magistrate
20 judge, a Chesterfield County magistrate.

21 If for some reason a magistrate would not sign our
22 warrants, we would schedule a meeting with an
23 assistant commonwealth's attorney. We would speak
24 with them about the matter and then try to schedule a
25 time to see a circuit court judge.

HYLTON - DIRECT

606

1 Q Why at that directive?

2 A We were -- at the time we were overburdening the
3 courts, and specifically the on-call judge. At least
4 that was my understanding of it.

5 Q And that concern was coming from the Court?

6 A That's correct.

7 Q Okay. Now, was this the first geofence warrant in
8 which you actually obtained the returns from Google?

9 A Yes.

10 Q Why hadn't you obtained the returns previously?

11 A Most of the incidents I was searching or working
12 on prior to this particular geofence warrant weren't
13 ones that were immediately concerning the public's
14 welfare and safety.

15 Q Okay. But did you request the information back
16 from them?

17 A Not in the same way that I did in this particular
18 investigation. But yes, I submitted the search
19 warrants, and I was awaiting a return.

20 Q Now, are you familiar at all with Google's
21 internal practices about how they execute these
22 warrants?

23 A No, sir, other than I submit them to Google, along
24 with a nondisclosure order. They receive them and
25 then process them however it is that they do that.

HYLTON - DIRECT

607

1 Q Now, there's been some discussion about cell phone
2 dumps. Why didn't you get a cell tower dump in this
3 case?

4 A It may have been an investigative technique that I
5 would have done later, but in this particular
6 instance, normally I reserve a tower dump search
7 warrant for multiple crimes, multiple incidents,
8 locations, things of that nature.

9 Q Okay. Now, let me -- before we get into the heart
10 of the search warrant, can you explain for the Court
11 what happened on May 20, 2019?

12 A Yes, sir. I was on duty or rather just got off
13 duty, and I was informed by supervision that there was
14 a bank robbery that had just occurred at the Call
15 Federal Credit Union on Hull Street Road around the
16 Genito area with a loss of approximately \$195,000.

17 I came back on duty to respond out to the bank
18 robbery as that was kind of my primary focus with
19 Chesterfield at the time.

20 After my response to the scene, I interviewed
21 witnesses, I reviewed surveillance camera video from
22 both -- or at that time mostly just the Call Federal
23 Credit Union Bank.

24 Through a culmination of all those investigative
25 things that I had done at that point, I learned that a

HYLTON - DIRECT

608

1 suspect had come from the southwestern corner of the
2 Journey Christian Church, which is a building adjacent
3 and to the east of Call Federal Credit Union, at
4 approximately 4:50 in the afternoon.

5 That same subject walked north in the parking lot,
6 and then towards the front of the bank itself while
7 holding what appeared to be like a cell phone to the
8 side of his face or the side of his head.

9 That party then entered the bank, and we were able
10 to get kind of a fuller shot of what he looked like.

11 It was a black male. Witnesses described him, I
12 think, in his twenties or thirties, approximately.
13 Witness advised that he had a Jamaican accent, that he
14 had kind of a scruffy beard and braided hair
15 underneath of what was a round maybe fisherman's hat.
16 He had reflective sunglasses and a reflective traffic
17 vest.

18 He approached one teller while still having a cell
19 phone up to the side of his face. He removes that
20 cell phone, walks up to what we call a victim teller,
21 presents a demand note. And I guess we can get into
22 that further if you'd like.

23 But basically saying, I have your family as a
24 hostage, your loved ones as a hostage outside. I have
25 my -- I don't recall exactly how it says. But I know

HYLTON - DIRECT

609

1 people outside that have your family as hostage. If I
2 see law enforcement responding, they may be hurt. You
3 or your co-workers may be hurt.

4 The clerk advised the suspect, Hey, I don't have
5 that much money. I don't have a \$100,000 to give you.
6 At which point he produces a silver or a black firearm
7 and demands that all of the patrons and both employees
8 of the bank come to the center area just as you enter.

9 He forced everyone to the ground kneeling or
10 sitting, and, again, at gunpoint. Demanded who had
11 access to the safe. The manager at the time advised
12 that he did and kind of where the safe was located
13 within the bank, which was in one of the back corners.

14 The suspect at that point stood everybody up, and,
15 again, forced them all at gunpoint to the back of the
16 bank where the safe was located, ultimately, again,
17 putting everyone on the ground, and then forcing the
18 manager at the time to open the bank's vault or safe.
19 And then that's when he was able to take that money,
20 the \$195,000 that I spoke of, bank bands, insinuating,
21 you know, what drawers and things that they came from.

22 Then, I believe, he collected a cell phone or two,
23 and then started to exit, and then he kind of threw
24 the cell phone devices somewhere within the business.
25 And then kind of fled that same pattern around the

HYLTON - DIRECT

610

1 front of the bank and then back towards the
2 southwestern corner of the Journey Christian Church.

3 Q Okay. What, if anything, did the phone trigger
4 for you in terms of investigative techniques?

5 A For me, it meant that he could have possibly been
6 speaking with a coconspirator. And then, obviously,
7 for the purposes of the Google geofence warrant, that
8 Google may have actually collected data that could
9 have implicated him as being in the area at the time
10 of the robbery.

11 In combination with the phone, possibly being on a
12 phone call, and then the demand note to the victim
13 teller, it told me that there was a possibility that
14 he could have a lookout, that he could have a driver
15 nearby or someone that was kind of keeping watch for
16 law enforcement.

17 Q Okay. Now, prior to him entering the bank --
18 we've had some testimony. There was a witness who
19 said they saw a suspicious blue Buick behind the sort
20 of church area; right?

21 A Yes. That was an employee of the Journey
22 Christian Church that was leaving somewhere between
23 4:30 and 4:40 in the afternoon.

24 Q Now, the geofence warrant in this case was
25 obtained on June 14, 2019; right?

HYLTON - DIRECT

611

1 A Yes, approximately, like, three weeks or so after
2 the robbery occurred.

3 Q Did you conduct any investigation in the interim?

4 A I did.

5 Q Did you get some leads?

6 A We did.

7 Q Okay. Tell the Court a little bit about that.

8 A I believe an estranged girlfriend or wife or
9 whatever she was called in and basically said "I know
10 who did this robbery. It's my ex-boyfriend." So,
11 obviously, you know, he had some physical
12 characteristics that were similar. He actually wore a
13 fisherman style hat.

14 We were able to find him, interview him. I
15 gave -- I believe I acquired a search warrant to
16 acquire his cell phone device. We did some
17 examinations on his phone. We found that he wasn't in
18 the area at the time. He wasn't familiar with Call
19 Federal Credit Union. He didn't frequent the area,
20 even provided an alibi, I believe.

21 And we also had another party that one of the
22 employees of a separate Call Federal Credit Union had
23 brought to our attention that also had a blue Buick
24 Lacrosse, I believe, and also came into a Richmond
25 bank earlier that day wearing a traffic vest.

HYLTON - DIRECT

612

1 So my immediate concern at the time was this might
2 be a likely suspect. We ran that to the ground as
3 well. We were able to identify who that party was,
4 and we were actually able to find that he was on an
5 ankle monitor for, I believe, a crime that he
6 committed in Richmond.

7 And then, of course, we were able to look at the
8 GPS plots and data and see that he was nowhere near
9 the Call Federal Credit Union in question today.

10 Q And you go and you get the geofence warrant
11 sometime thereafter; right?

12 A That's correct.

13 Q I will show you what is marked as Government's
14 Exhibit 2 and what's been admitted, and that's your
15 search warrant; correct?

16 A Yes, sir.

17 Q That's your application?

18 A That's correct.

19 Q Now, when you submit this -- once you get the
20 search warrant signed off by the magistrate, is it
21 right that you submit -- what if we look at pages 4
22 and 5?

23 A Yes, that goes along with the search warrant.

24 Q Okay. And what else do you submit? Is it page
25 10?

HYLTON - DIRECT

613

1 A I'm sorry. The prior affidavits and 10 is going
2 to be an attachment to the actual search warrant
3 that's submitted to Google.

4 Q Okay. So if we look at -- I made a mistake. If
5 we look at pages 4 and 5, we can put them next to each
6 other and take a look. This is part of what you will
7 submit to Google; right?

8 A Yes. Well, specifically, this is part of the
9 affidavit to acquire the search warrant, but, yeah,
10 there's data associated with this that also goes along
11 with the search warrant attachment.

12 Q You don't actually submit what we will go through
13 as the factual recitation of the case to Google;
14 correct?

15 A No.

16 Q Okay. And the only other thing you submit in
17 addition to pages 4 and 5 would be page 8, if we look
18 at it; right?

19 A Yes, that's correct.

20 Q And just for purposes of the record, when I
21 mention these page numbers, I'm talking about the red
22 page numbering on Government's Exhibit 2.

23 A Yes.

24 Q Now, did you -- I just want to talk about the
25 substance of what you provided to the magistrate in

HYLTON - DIRECT

614

1 getting this search warrant.

2 THE COURT: Wait a minute. The questions you
3 were just asking him about are what went to Google?

4 MR. SIMON: Correct, Judge.

5 THE COURT: So just give me, again, the page
6 numbers that went to Google, please.

7 BY MR. SIMON:

8 Q Pages 4 and 5, correct, Detective Hylton?

9 A The actual -- for me what was actually presented
10 to Google would be page 8, page 10, and page 11 as far
11 as in my affidavit and search warrant go.

12 Q Just to be clear, you're using the word
13 "affidavit," but that's not -- you don't actually
14 submit to them the probable cause.

15 A Yes, they don't get any probable cause narrative
16 associated with the crime itself.

17 Q Okay. Now, looking at page 6, did you advise the
18 magistrate of the note that the suspect left with the
19 bank teller?

20 A Yes, sir.

21 Q Okay. Can we highlight that? You mentioned
22 earlier that the note indicated that the suspect was
23 potentially working with other people.

24 A Yes, sir.

25 Q Can you note for us where -- and it's highlighted

HYLTON - DIRECT

615

1 on the screen for you -- sort of where in there you
2 got that inkling?

3 A Pretty much the first and second sentence. Would
4 you like me to read it?

5 Q Sure.

6 A Okay. "I've been watching you for sometime now.
7 I got your family as hostage and I know where you
8 live, if you or your coworker alert the cops or anyone
9 your family and you are going to be hurt. I got my
10 boys on the lookout out side. The first cop car they
11 see am going to start hurting everyone in sight, hand
12 over all the cash. I need at least 100k and nobody
13 will get hurt and your family will be set free. Think
14 smartly. Everyone safety is depending and you and
15 your coworkers action so I hope they don't try nothing
16 stupid."

17 Q And did you also at the same time advise the
18 magistrate that the suspected bank robber had a
19 cellular telephone?

20 A Yes, sir.

21 Q Can we look at the paragraph starting "upon
22 investigative response"?

23 A Yes.

24 Q Is this the paragraph in which you advise the
25 magistrate about the cellular telephone?

HYLTON - DIRECT

616

1 A That's correct.

2 Q Can you go ahead and read some of this paragraph
3 starting with the first few lines?

4 A Sure. Upon investigative response, law
5 enforcement officials reviewed the bank's surveillance
6 video prior to the robbery and noted the UNSUB, which
7 is an unknown subject, had a cell phone in his right
8 hand and appeared to be speaking with someone on the
9 device. Subsequently, your affiant finds it necessary
10 and prudent to request that Google provide geofencing
11 data in order to assist with the investigation. In
12 the undersigned's training and experience, when people
13 act in concert with one another to commit a crime,
14 they frequently utilize cellular telephones and other
15 such electronic devices, to communicate with each
16 other through Wi-Fi, Bluetooth, GPS, voice calls, text
17 messages, social media accounts, applications, emails,
18 and/or cell towers in the area of victim-businesses,
19 and in this case, located at 3640 Call Federal Drive,
20 Chesterfield, Virginia 23235. Furthermore, the
21 requested data/information would have been captured by
22 Google during the requested time.

23 Q Okay. And if we go to page 7, did you then advise
24 the magistrate about Google location information,
25 Google accounts, and cellular telephones, a bit more

HYLTON - DIRECT

617

1 information there?

2 A Yes, sir.

3 Q If we look at the second paragraph, is that one of
4 the places in which you tie the fact that Google --
5 that folks can have Google accounts on their cellular
6 telephones?

7 A Yes, sir, that's correct.

8 Q And then if we look at paragraph 3, as well.

9 A Yes, sir, that's correct, as well.

10 Q Now, in addition to -- in this particular
11 paragraph, paragraph 3 on page 7, notes Android phones
12 as a place where Google accounts might be included.

13 Did you also advise the magistrate that Google
14 accounts could be on non-Android phones?

15 A That's correct, through applications of similar
16 sorts.

17 Q Now, did you tie the fact that Google location
18 information -- or Google accounts are on phones, but
19 did you also tie the fact that Google collects
20 location information from these phones?

21 A Yes, sir.

22 Q If we look at paragraphs 4 and 6, and I think
23 we'll have to look at them one at a time. Look at
24 paragraph 4 here. Is this one of the paragraphs in
25 which you advised -- in which you advise the Court

HYLTON - DIRECT

618

1 that Google location information could be captured by
2 cellular telephones?

3 A Yes, sir, that's correct.

4 Q Now, looking at paragraph 6 on page 7 of
5 Government's Exhibit 2, is this another paragraph in
6 which you noted to the magistrate why location
7 information might be on a cellular telephone?

8 A That's correct.

9 Q And why that -- and noted that that location
10 information is tied to a Google account?

11 A Yes, that's correct.

12 Q Now, have you in your personal experience ever
13 encountered a situation set forth in paragraph 6 there
14 using images or videos on a cellular telephone to
15 solve a crime?

16 A Yes, sir.

17 Q Can you tell us about that?

18 A Sure. In a few instances that I've investigated
19 crimes, I've had an abduction at gunpoint, knifepoint,
20 where a subject was carjacked and then taken to the
21 place of a robbery. When we ended up developing a
22 lead or a target in that particular investigation, we
23 were able to gain probable cause, conduct a Facebook
24 search warrant for his data, and he actually had
25 multiple GPS plots showing that he was in the area of

HYLTON - DIRECT

619

1 the robbery, and actually posting pictures and things
2 of that nature associated with the robbery in the
3 general area of the parking lot of the business that
4 was robbed.

5 And similar type instances where I've worked other
6 robberies where suspects have had metadata associated
7 with an image or even video prior to and after a
8 robbery where he's taking pictures of himself,
9 flashing money subsequent to the robbery, or flashing
10 a firearm and even a mask prior to actually committing
11 a robbery.

12 MR. SIMON: Judge, I've got a few more
13 questions, probably two or three, I think.

14 BY MR. SIMON:

15 Q With respect to this pervasiveness of cell phones
16 in American society, did you set that forth in
17 paragraph 7 of this on page 7?

18 A Yes, sir.

19 Q Is that the Pew Research study set forth there?

20 A That's correct. Although, it was likely dated at
21 the time as that was September 2013.

22 Q In addition to the fact that all of this
23 information is out there, and we talked about
24 paragraph 6, but did you also in paragraph 5 explain
25 for the magistrate how this information would be

HYLTON - DIRECT

620

1 helpful in terms of locating an individual?

2 A Yes, that's correct.

3 Q Can we highlight paragraph 5 here. Can you read
4 that?

5 A Sure. "This applicant knows that location data
6 can assist investigators in forming a fuller
7 geospatial understanding and timeline related to a
8 specific criminal investigation and may tend to
9 identify potential witnesses and/or suspects. Such
10 information can also aid investigators in possibly
11 inculcating or exculpating persons of interest."

12 Q So that paragraph notes the potential interest in
13 witnesses as well?

14 A That's correct.

15 Q Again, this affidavit, pages 6 and 7, that we just
16 went through, Google had no knowledge of these facts;
17 correct?

18 A That's correct.

19 Q And it's typical practice not to give these
20 companies the actual facts of the case; right?

21 A That's correct.

22 Q Now, I'm just going to end with quickly showing
23 you Government's Exhibit 4. It's a number of pages
24 there. Just take a look at them. Do you recognize
25 the pages in Government's Exhibit 4?

HYLTON - DIRECT

621

1 A Yes.

2 Q What are those?

3 A These are correspondence between myself and Google
4 through email.

5 Q Okay. And that's an accurate reflection of those
6 emails?

7 A Yes, sir.

8 MR. SIMON: Judge, we move to admit and
9 publish briefly these emails.

10 MS. KOENIG: No objection.

11 THE COURT: All right. They'll be entered.

12 (Government's Exhibit No. 4 is admitted into
13 evidence.)

14 BY MR. SIMON:

15 Q Now, let me ask you just some quick questions
16 here. The emails that were sent to Google, was there
17 a fair amount of follow-up via email?

18 A No, I don't believe any except for the receipt of
19 the stages during the process.

20 Q Okay. And so when you talked with -- Sarah
21 Rodriguez mentioned that at some point you talked with
22 someone from Google on July 8. Did you initiate that
23 communication?

24 A I did, but I believe I called twice.

25 Q Why did you call on July 8?

HYLTON - DIRECT

622

1 A It was either to receive the first or to try to
2 receive Stage 1 at a faster rate of speed due to the
3 exigency of the suspect posing a danger to the public
4 and then also being a possible flight risk.

5 Q The July 8 communications, that came after you
6 received the first round; right?

7 A Yes, that's correct.

8 Q So when you called on July 8, you were trying to
9 get the second round of information?

10 A Correct.

11 Q And prior to that you had sent two emails;
12 correct?

13 A Yes.

14 Q And had received no communication from Google?

15 A That's correct.

16 Q Throughout these emails, did you tell anything to
17 Google about the dangerousness of the situation?

18 A I did.

19 Q And these emails were sent in consultation with my
20 office; right?

21 A That's correct.

22 THE COURT: Consultation with whom?

23 MR. SIMON: Consultation with my office.

24 THE COURT: Okay.

25 MR. SIMON: No further questions, Judge.

HYLTON - CROSS

623

1 THE COURT: Is there cross?

2 MS. KOENIG: Yes, sir.

3 MR. SIMON: Judge, I think I moved Exhibit 4
4 in already.

5 THE COURT: You did.

6 CROSS-EXAMINATION

7 BY MS. KOENIG:

8 Q Good evening, Detective.

9 A Good evening.

10 Q I want to start with the surveillance videos. So
11 you looked, as a part of the investigation, at the
12 widest surveillance videos that the bank had provided;
13 right?

14 A That's correct.

15 Q And you looked at those before June 14th of 2019?

16 A Yes, ma'am.

17 Q And those surveillance videos include outside
18 areas of the bank; right?

19 A That's correct.

20 Q And you also looked at the church surveillance
21 videos; right?

22 A Yes, ma'am.

23 Q And the church surveillance videos include
24 directions that face from the church toward the bank;
25 right?

HYLTON - CROSS

624

1 A That's correct.

2 Q And include wide swaths of that parking area;
3 right?

4 A Yes, ma'am.

5 Q I want to make sure, you had looked at that before
6 you filed for this warrant on June 14th of 2019;
7 right?

8 A I believe so.

9 Q And you also had a witness that was at the church;
10 right?

11 A Yes, ma'am.

12 Q And that witness said that that person saw -- that
13 that witness saw one individual walking toward a blue
14 Buick; right?

15 A No, ma'am. One individual inside of a blue Buick.

16 Q I'm sorry. And did they provide a description of
17 the person that was inside of the vehicle?

18 A That description changed in three different
19 interviews with that individual. I believe the
20 initial was a black male. Then, I think, it became a
21 person or a male. And then I don't recall what the
22 last interview was.

23 Q All right. When you watched the bank surveillance
24 videos, you saw no one else that you could not account
25 for except for the suspect in the fisherman's hat and

HYLTON - CROSS

625

1 the traffic vest; right?

2 A Yes, ma'am, that's correct.

3 Q And when you watched the church surveillance
4 videos, you saw no one else that you could not account
5 for except for the suspect in the fisherman's hat and
6 the traffic vest; right?

7 A That's correct.

8 Q You did not put those details in your affidavit to
9 the magistrate; right?

10 A No, ma'am. If they're not in there individually,
11 they're not in there.

12 Q All right. In going to your statement --

13 A Actually, ma'am, I do apologize. I did mention, I
14 believe, in a part of my affidavit where a suspicious
15 subject was seen parked behind the southwestern corner
16 of the church.

17 Q Sure, but you didn't mention that you hadn't --
18 you had seen surveillance video and you had not seen
19 any other possible codefendants on the surveillance
20 video.

21 A That's correct. No other codefendants were seen.

22 Q All right. And you also didn't see any hostages
23 being held anywhere outside of the bank; right?

24 A No, ma'am.

25 Q I want to make sure I heard. How many -- before

HYLTON - CROSS

626

1 June 14 of 2019, how many geofence warrants had you
2 applied for?

3 A Three.

4 Q One is a search warrant from April 11 of 2019 in
5 Chesterfield County; right?

6 A That's correct.

7 Q One is a federal search warrant from February 22,
8 2019, from this courthouse, Judge Novak?

9 A That's correct.

10 Q What is the third one?

11 A The third one is the one that's under seal. It's
12 a homicide investigation. It was also obtained in
13 April, but I -- did you say the first was obtained on
14 the 8th or April 8th?

15 Q April 11.

16 A April 11. I believe the other is actually
17 April 8.

18 MS. KOENIG: Your Honor, I don't mean to
19 belabor this point. We have asked ad nauseam for
20 these warrants. I have asked several times. I have
21 emails from Mr. Simon that indicate that the only two
22 warrants that he had applied for before were the state
23 search warrant that I have identified on April 11 of
24 2019 and the federal search warrant. I do not have a
25 copy of any third search warrant, and I'm asking for

HYLTON - CROSS

627

1 that yet again.

2 MR. SIMON: Judge, we've given every search
3 warrant that we can get access to in this case. I
4 also would have to look at the briefs. I'm pretty
5 sure we indicated three. I don't want to say anything
6 that's wrong.

7 What I can tell you is that I know I can't
8 get access to the third. That's an ongoing homicide
9 investigation. And the ACA there certainly is not
10 inclined to unseal that. That's my understanding.
11 And so that's sort of the fullest extent that I can
12 get into that. But, as I've noted, we've given
13 everything that we have.

14 THE COURT: All right. I'm going to allow
15 you all to brief that up later based on the record
16 that you can establish. Five pages each.

17 THE WITNESS: If I can, ma'am. That matter
18 hasn't even come up in court yet. It's actually
19 scheduled to be January of 2022.

20 BY MS. KOENIG:

21 Q All right. So let's go back to your training and
22 experience. You have not received any specific
23 training about geofence warrants; right?

24 A No, ma'am, I have not.

25 Q And you've not received any training specific to

HYLTON - CROSS

628

1 how to request geofence warrants; right?

2 A No, ma'am.

3 Q You learned about geofence warrants through other
4 police officers that you work with; right?

5 A That's correct.

6 Q All right. So let's look at Defense Exhibit --
7 I'm sorry. If we could pull up Government's Exhibit
8 2, please. Thank you. All right. Government's
9 Exhibit 2 is the geofence warrant in this case; right?

10 A Yes, ma'am.

11 Q All right. So let's look at Attachment 1, which
12 is on page 3. And if you can flip in the defense
13 exhibit book to Defense Exhibit 19, please.

14 A I apologize.

15 Q It is the big one.

16 A You said 19, ma'am?

17 Q Yes. I'll just kind of save you a little bit of
18 time.

19 A I'd appreciate it.

20 Q Absolutely. So that exhibit comprises two
21 warrants. If you'll see that there's a warrant --
22 I'll wait until you get there.

23 THE COURT: I'm not there yet either.

24 MS. KOENIG: Sorry, Your Honor.

25 BY MS. KOENIG:

HYLTON - CROSS

629

1 Q All right. So would you agree with me that that
2 exhibit contains two warrants, one of which has the
3 warrant -- the affidavit file number of 42 at the
4 beginning?

5 A Yes, ma'am.

6 Q And then the subsequent pages to that are related
7 to that warrant; right?

8 A That's correct.

9 Q And then the second warrant is affidavit file
10 No. 472; right?

11 A Are we speaking of my search warrant at this
12 point?

13 Q That's correct.

14 A That's correct.

15 Q So that's 472 is your search warrant; right? You
16 can look at it.

17 A Yes, ma'am.

18 Q So look at Attachment 1 from the geofence warrant
19 in this case. Just keep your page. Don't change the
20 page.

21 A Sorry.

22 Q That's okay. So I want you to compare Attachment
23 1 from Government's Exhibit 2 to Attachment 1 in the
24 affidavit that you filed in file No. 472.

25 A So, just to clarify, Detective Humphries

HYLTON - CROSS

630

1 Attachment 1 versus my Attachment 1.

2 Q Correct. Let's just make this easier. Detective
3 Humphries filed for the affidavit in search warrant
4 number -- the affidavit file No. 42; right?

5 A Correct.

6 Q Detective Humphries is somebody that you work with
7 at the Chesterfield County Police Department; right?

8 A Yes, that's correct.

9 Q All right. So, again, let's look at the
10 Attachment 1 from Government's Exhibit 2 and compare
11 that to Attachment 1 in file No. 472, which is the
12 second warrant in Exhibit 19.

13 A Yes, ma'am.

14 Q Those are the same; right?

15 A As far as I can see, they're pretty much the same.

16 Q While we're on Attachment 1, let's look at file
17 No. 42, which is the first warrant, Defense Exhibit
18 19.

19 A Okay.

20 Q So when you look at Attachment 1 -- Attachment 1,
21 go to Detective Humphries --

22 A Yes, I'm on Detective Humphries'.

23 Q Okay. Attachment 1 in Detective Humphries'
24 affidavit, which is file No. 42, is also the same as
25 the search warrant Attachment 1 in this geofence

HYLTON - CROSS

631

1 warrant case, in our case; right?

2 A Yes, ma'am.

3 Q All right. Let's go to Attachment 2 of
4 Government's Exhibit 2. All right.

5 So Government's Exhibit 2, Attachment 2, please
6 compare that to your search warrant in file No. 472,
7 which you got, which is the second warrant, that's in
8 Defense Exhibit 19.

9 A Without directing looking at them, I believe it's
10 going to be the same since I'm the one that filed it,
11 or, sorry, I'm the one that acquired it.

12 Q And the only thing that's different, right, is the
13 date and time?

14 A Correct.

15 Q The crime that is associated and the geographic
16 area to be searched; right?

17 A That's right.

18 Q So let's compare Government Exhibit 2, Attachment
19 2, to Detective Humphries' Attachment 2 in file
20 No. 42.

21 A Okay.

22 Q And, again, the only substantive changes, right,
23 are the date and time that applies and the geographic
24 location; right?

25 A Yes, ma'am. And then the way that the --

HYLTON - CROSS

632

1 Q There's a little formatting change; right?

2 A Correct.

3 Q All right. So you did not draft either Attachment
4 1 or Attachment 2 for your June 14, 2019 warrant in
5 this case; right?

6 A Not solely by myself, no.

7 Q Okay. And you mentioned already that you had
8 applied for a --

9 MS. KOENIG: Judge, I move to admit Defense
10 Exhibit 19?

11 THE COURT: Any objection?

12 MR. SIMON: Judge, I would object to it being
13 entered into the record. I think it's fairly clear
14 he's using a go by, but I don't know why we'd want a
15 different detective's search warrant in this
16 particular record. It has nothing to do with this
17 case or the probable cause in his warrant.

18 THE COURT: Well, she's using it to say it's
19 the same language. So she's acknowledging they're
20 different things.

21 MR. SIMON: Okay.

22 THE COURT: So that's overruled.

23 (Defense Exhibit No. 19 is admitted into
24 evidence.)

25 BY MS. KOENIG:

HYLTON - CROSS

633

1 Q And I forgot to ask you, Detective, although it is
2 apparent from the face of the application --

3 THE COURT: You are talking to your computer.

4 MS. KOENIG: Thank you.

5 BY MS. KOENIG:

6 Q I forgot to ask you, did file No. 42 that
7 Detective Humphries got --

8 A Yes.

9 Q He got that affidavit -- he filed for that search
10 warrant on January 8 of 2019; right?

11 A Yes, ma'am.

12 Q All right. So, let's turn -- you mentioned a
13 federal search warrant. The federal search warrant
14 is -- let's look at Defense Exhibit 18.

15 A Are we still going to be using mine as a
16 reference, as well?

17 Q We are. You know where I'm going.

18 A All right. Go ahead.

19 Q So this is the federal search warrant that you
20 applied for; right?

21 A Yes, ma'am.

22 Q All right. And you got this warrant on
23 February 22, 2019?

24 A Uh-huh.

25 Q And that's a yes or a no?

HYLTON - CROSS

634

1 A Yes, ma'am. Sorry.

2 Q That's okay. Let's look at Attachment A of the
3 federal warrant. It's ECF page No. 20 at the top.

4 A Page 20?

5 Q Yes.

6 A All right. Thank you.

7 Q So when we are looking at Attachment A and
8 comparing Attachment A -- so Attachment A is the
9 property to be searched; right?

10 A Yes, ma'am.

11 Q All right. And that is a similar purpose for
12 Attachment 1 in Government's Exhibit 2; right?

13 A That's correct.

14 Q All right. The language varies dramatically;
15 right?

16 A Somewhat, and that's mostly actually due to the
17 structure of the federal warrant versus the state
18 search warrant.

19 Q Sure. Well, aside from -- the only thing that
20 actually is the same in terms of the language is the
21 place where Google accepts legal process in Mountain
22 View, California; right?

23 A That's correct. And that's actually listed in a
24 different place in my affidavit and search warrant.

25 Q That's fine. So, then we get locations A through

HYLTON - CROSS

635

1 O on that page; right?

2 A Yes.

3 Q And you put together locations A through O; right?

4 A I did.

5 Q You did not draft that paragraph above the
6 locations A through O; right?

7 A No, I didn't specifically -- that was kind of the
8 go by situation that we were referring to earlier.

9 Q All right. So, let's go to Attachment B in
10 Defense Exhibit 18, and that starts on page 31 of the
11 ECF at the top of that exhibit.

12 A Okay.

13 Q All right. So, again, we're going to compare. So
14 Attachment B in Defense Exhibit 18 is items to be
15 seized and searched; right?

16 A Yes, that's correct.

17 Q And the purpose of that attachment is similar to
18 the purpose of Attachment 2 of Government's Exhibit 2;
19 right?

20 A Yes, ma'am.

21 Q All right. And that outlines the three-step
22 process -- Attachment B sets out the three-step
23 process that Google created for geofence warrants?

24 A Yes, ma'am.

25 Q So when we compare Attachment B in Defense Exhibit

HYLTON - CROSS

636

1 18 to Attachment 2 in Government's Exhibit 2, those
2 are different; right?

3 A Yes, ma'am, slightly different.

4 Q Slightly?

5 A Well, in the way that they're laid out, but the
6 information that I'm seeking is still the same.

7 Q But there's not a single sentence in Attachment B
8 in Defense Exhibit 18 that is the same as Attachment 2
9 in Government's Exhibit 2; right? You can take your
10 time.

11 A Okay.

12 Not on this particular page I'm looking through
13 right now.

14 Q It's a pretty short second page.

15 A That's correct.

16 Q And you also didn't write Attachment B to the
17 federal search warrant; right?

18 A As in come up with the language myself? No,
19 ma'am.

20 Q Correct. Thank you.

21 MS. KOENIG: I move to admit Defense Exhibit
22 18, Your Honor.

23 MR. SIMON: No objection, Judge.

24 THE COURT: It will be entered.

25 (Defense Exhibit No. 18 is admitted into

HYLTON - CROSS

637

1 evidence.)

2 BY MS. KOENIG:

3 Q When you were putting together the geofence
4 warrant in this case in Government's Exhibit 2, you
5 did not have a suspect; right? You had a body. You
6 didn't have any individual person; right?

7 A That's correct. I did not have a name attached to
8 the suspect at that time.

9 Q All right. And the only way you gained the
10 suspect in this case was through the geofence warrant;
11 right?

12 A In this particular instance, yes.

13 Q And you ultimately identified Okello Chatrie as a
14 suspect in this case?

15 A I did.

16 Q And you investigated Mr. Chatrie's background?

17 A Yes, ma'am.

18 Q You knew he was Jamaican?

19 A I did.

20 Q You knew he came to the United States from Jamaica
21 in 2017?

22 A That's correct?

23 THE COURT: You are --

24 MS. KOENIG: I'm sorry, Your Honor.

25 BY MS. KOENIG:

HYLTON - CROSS

638

1 Q Let's talk now about when you presented the
2 affidavit that you assembled in Government's Exhibit 2
3 to the magistrate.

4 A Okay.

5 Q You went to Magistrate David Bishop; right?

6 A That's correct.

7 Q Did you know that Mr. Bishop had never before
8 issued a geofence warrant?

9 A I did not.

10 Q Was he the only magistrate on duty when you
11 presented him with a geofence warrant application in
12 the case?

13 A It's been a while. Normally, they have two or
14 three on duty.

15 Q How did you present it to him?

16 A In the way that it's kind of seen here.

17 Q I'm sorry. Maybe I'll be more specific. How did
18 you physically present it to him? Did you just hand
19 it to him?

20 A Yes, ma'am. I walk up to him. I hand him the
21 affidavit. I sign it in front of him. I swear. Then
22 he takes that paperwork, and he reviews it himself,
23 and then decides if there's probable cause based on
24 what he's reading in the four corners of the actual
25 affidavit itself.

HYLTON - CROSS

639

1 Q Did Mr. Bishop ask you any questions about the
2 contents of the application?

3 A I don't recall any questions asked.

4 Q Did he seek to modify anything in the affidavit at
5 all?

6 A No, ma'am.

7 Q Did he just read it and sign it?

8 A That's my understanding. He could have consulted
9 with someone. I wasn't sure.

10 Q Did he read it in front of you?

11 A I don't believe so.

12 Q How long did it take?

13 A I don't know. It's been 2019. I couldn't advise.

14 Q More than 15 minutes?

15 A I would assume so.

16 Q More than 30 minutes?

17 A I don't know. I'm sorry.

18 Q All right. So, going back to the --

19 MS. KOENIG: Let's see if we can switch
20 screens to the government's screen, Ms. Hancock.

21 BY MS. KOENIG:

22 Q So going back to Attachment 2 of Government's
23 Exhibit 2, which is page 5, on the second page or on
24 that page, second page of Attachment 2, there is a
25 picture; right?

HYLTON - CROSS

640

1 A Yes, ma'am.

2 Q And that is the geofence itself; right?

3 A That's correct.

4 Q And so you have a description of that area above
5 the picture; right?

6 A Yes.

7 Q And that description says, "An area encompassing
8 the Call Federal Credit Union and an adjacent
9 business"; right?

10 A Yes.

11 Q That adjacent business you're referring to is the
12 Journey Christian Church?

13 A That's correct.

14 Q And that's the much larger building to the right
15 of the credit union in the picture that we're looking
16 at?

17 A That's correct.

18 Q And so you've obviously been a detective in
19 Chesterfield for a little while; right?

20 A Yes, ma'am.

21 Q And you went to the bank the day of the robbery;
22 right?

23 A I did.

24 Q You knew it was the Journey Christian Church next
25 door; right?

HYLTON - CROSS

641

1 A Yes, ma'am.

2 Q And you knew that the Journey Christian Church is
3 what we would call a mega church?

4 A It was a church within a --

5 Q It's a very large church.

6 A Yes, it's a large building, but it's actually an
7 old Costco or something to that nature.

8 Q Sure. And you know a lot of people attend that
9 church; right?

10 A No, ma'am.

11 Q You don't know that?

12 A I don't know any person to my knowledge that goes
13 to that church.

14 Q All right. Let's talk about the time frame for
15 the execution of the warrant. So if we can look at
16 Government's Exhibit 4. I guess I can pull it up on
17 mine. Let me do that. All right. So you submit --
18 are you there?

19 A Yes, ma'am.

20 Q Okay. So page 1. You submit -- you get the
21 warrant on June 14, 2019; right?

22 A That's correct.

23 Q You submit it to Google on June 20, 2019; right?

24 A Yes.

25 Q You sent some follow-up information to Google on

HYLTON - CROSS

642

1 June 25, 2019; right?

2 A Yes.

3 Q And Google provides you the Stage 1 response on
4 June 28, 2019?

5 A That's correct.

6 Q And in the Stage 1 response, you get the location
7 data on the 19 devices?

8 A Yes.

9 Q And then on July 1, 2019, you make the first Stage
10 2 request?

11 A That's right.

12 Q On July 2, you make a second Stage 2 request?

13 A Yes, ma'am.

14 Q And on July 8, you make a third Stage 2 request;
15 right?

16 A Yes, that's correct.

17 Q And then after you make that email request on
18 July 8, 2019, that's when you leave the two messages
19 for the LIS specialist at Google; right?

20 A Yes, ma'am.

21 Q And that person calls you later that day; right?

22 A They did.

23 Q All right. So then July 9 is when you narrow down
24 the Stage 2 request to nine devices?

25 A That's correct.

HYLTON - CROSS

643

1 Q And you get the second stage return on the same
2 day?

3 A Yes, ma'am. Looks that way.

4 Q And then July 10, you make the Stage 3 request?

5 A Yes.

6 Q And then July 11, you email again asking for the
7 Stage 3 data?

8 A Yes.

9 Q And then July 11, you get the Stage 3 data?

10 A That's correct.

11 Q All right. So I want to talk to you about search
12 warrant returns.

13 A Okay.

14 Q The purpose of a -- well, a search warrant return
15 is a document that notifies the Court when you execute
16 the search warrant; right?

17 A Yes, ma'am.

18 Q When you execute a geofence search warrant, it's
19 executed when you send it to Google; right?

20 A That's correct.

21 Q And you send it via the LER system; right?

22 A Yes, ma'am, the L-E-R system, yes.

23 Q And in return, you also report -- in the return,
24 you also report back to the Court what items you
25 gathered during the search; right?

HYLTON - CROSS

644

1 A That's correct.

2 Q All right. So let's look at Government's Exhibit
3 2, which I will pull up on the screen. No, I don't
4 have it. Government's Exhibit 2 on page 9.

5 MS. KOENIG: Ms. Hancock, if we could ask, if
6 we could get the government's screen, that would be
7 great. All right. Thank you very much.

8 BY MS. KOENIG:

9 Q So we are looking on page 9 of Government's
10 Exhibit 2 at the "search inventory and return" on this
11 case; right?

12 A Yes, ma'am.

13 Q So, in the execution part on the right-hand side,
14 you indicate that the search warrant was executed on
15 July 14, 2019, at 10:30 in the morning.

16 A That's correct.

17 Q And that's not true; right?

18 A That's correct, not when it was forwarded to
19 Google, that's correct.

20 Q And we just discussed that when you forward it to
21 Google, that is the execution of the warrant; right?

22 A Yes, ma'am, that's when Google receives the
23 warrant.

24 Q All right. You filed this return on June 19 of
25 2019; right?

HYLTON - CROSS

645

1 A Yes, ma'am, that's when it was submitted
2 physically to Google through the LERS website.

3 Q Well, we'll come back to that in a second.

4 So, in the bottom half of the search inventory and
5 return, there's a portion that has your signature.
6 I'm assuming that's right above executing officer?

7 A Yes.

8 Q It's about the same as my signature. I'll tell
9 you, I'm not going to give you grief about that.

10 And then the date is June 19th of 2019; right?

11 A That's correct.

12 Q And the statement above that says, "The statement
13 above is true and accurate to the best of my knowledge
14 and belief"; right?

15 A Yes, ma'am.

16 Q And you indicate that what you had received and
17 seized pursuant to this warrant is data; right?

18 A That's correct.

19 Q All right. So this is June 19th of 2019. When we
20 go to Government's Exhibit 4 at page 1, you do not
21 submit the Google -- the geofence warrant in this case
22 to Google until June 20th, the day after you file a
23 return; right?

24 A Yes, ma'am, that's correct. This is their
25 response to having received it in the LERS program.

HYLTON - CROSS

646

1 Q And you also don't receive any data, even the
2 Stage 1 data, until June 28th of 2019; right?

3 A That's correct. Sounds correct.

4 Q And then you don't receive the final Stage 3 data,
5 which is ultimately what you're seeking, until July 3?
6 I'm sorry. July 11 of 2019?

7 A That's the Stage 3 data?

8 Q Yes.

9 A Yes, ma'am, that's correct.

10 MS. KOENIG: No further questions.

11 MR. SIMON: Judge, I just want to put on the
12 record something about the sealed search warrant.

13 THE COURT: Okay. So there's no further
14 questions?

15 MR. SIMON: A question.

16 THE COURT: All right. It's going to be a
17 couple minutes, because we're about two minutes away
18 from one hour.

19 MR. SIMON: Judge, I think it might literally
20 take three minutes.

21 THE COURT: All right.

22 REDIRECT EXAMINATION

23 BY MR. SIMON:

24 Q Detective Hylton, the search warrant that's under
25 seal, did you seek to get that record from the

HYLTON - REDIRECT

647

1 Assistant Commonwealth's Attorney?

2 A I believe I did.

3 Q And what, if anything, did he tell you about
4 whether he wanted keep that search warrant sealed?

5 A She. And she told me no, it was sealed.

6 Q And that she wanted to keep it sealed; correct?

7 A That's correct.

8 MR. SIMON: No further questions, Judge.

9 THE COURT: All right. Can this witness be
10 excused?

11 MS. KOENIG: From the defense' perspective,
12 yes, Your Honor.

13 MR. SIMON: From the United States, yes.

14 THE COURT: All right. You may be excused,
15 sir.

16 (The witness was excused from the witness
17 stand.)

18 THE COURT: So there's no further evidence;
19 am I right?

20 MR. SIMON: No further evidence, Judge.

21 THE COURT: So this is what we're going to
22 do. We're going to take a recess. I'm going to have
23 you guys talk about what the next process is. I
24 presume you're going to order a transcript. So I want
25 you to sort of talk about that, and then hopefully not

1 very long we'll put something on the record.

2 If y'all need time to talk about, you know,
3 the five-page submission about the sealed warrant, fit
4 that in. If you think you can't get it done tonight
5 because folks are too blurry eyed, we can do
6 something, I guess, by ZOOM on Monday as far as
7 scheduling. But I want to try to close this up,
8 realistically, as far as what the next steps will be.
9 All right?

10 MR. SIMON: Understood, Judge.

11 THE COURT: Okay. So we're going to take a
12 brief recess.

13 Thank you, Officer Hylton. I did that late.
14 Thank you for your testimony.

15 OFFICER HYLTON: Yes, ma'am.

16 (Recess taken 7:15 p.m. until 7:27 p.m.)

17 THE COURT: All right. What are our
18 logistics?

19 MS. KOENIG: Your Honor, we've spoken with
20 Ms. Daffron, who's let us know when the transcript can
21 be ready, and based on that, we would request that by
22 April 30th the defense submit a supplemental motion to
23 suppress that addresses the legal issues on the basis
24 of the facts and evidence presented.

25 The government would file their response on

1 May 21st. And then the defense would file a reply on
2 June 4.

3 In terms of the state search warrant that
4 Detective Hylton discussed that's under seal, the
5 understanding is that the government -- or my
6 understanding is that the government is going to
7 review -- because my question is whether or not
8 Attachments 1 and 2 in that warrant are different than
9 what is in Government's Exhibit 2. And so they are
10 going to review that and get back to us, and if we
11 have any further issues past that, I'll let you know.

12 THE COURT: Okay.

13 MS. KOENIG: I think that addresses the
14 issues. And I've spoken with Ms. Hancock. Instead of
15 keeping everyone here tonight to sort out exhibits,
16 we'll sort them out next week.

17 THE COURT: No, I think that makes great
18 sense.

19 So we'll issue that order with respect to
20 briefing. If you all want to schedule just an
21 argument after that, we can also consider that date,
22 so that's on the record at the same time. And I don't
23 know if you all will want that argument. I presume
24 you might actually. Right?

25 MS. KOENIG: I'm sorry.

1 THE COURT: Will you want argument?

2 MS. KOENIG: Yes.

3 THE COURT: Let me see if I have a calendar.
4 I know I have a calendar because I asked my clerk for
5 one, but that was a whole day ago.

6 How about we call you about potential
7 argument dates, and that will be in the order at the
8 same time. All right?

9 MS. KOENIG: Yes, Your Honor. Thank you.

10 THE COURT: That way I can check my record.

11 And let me ask, this is just on these
12 motions. You're going to rest on the motions that we
13 have as to the houses and the other materials?

14 MS. KOENIG: We'll wait until the Court
15 resolves this motion, I think, before we need to
16 resolve those.

17 THE COURT: Okay. So they will just remain
18 in place pending, and we will -- obviously, this
19 precedes all of that.

20 MS. KOENIG: That's right.

21 THE COURT: All right. So I appreciate your
22 efforts. I do think it will be worth going through
23 the exhibits. I have taken notes, and we have, and
24 it's important that we get the record exactly the way
25 we want it to be, including not just substituting your

1 43A, Ms. Koenig, but also substituting the documents
2 that we excised pages out of.

3 MS. KOENIG: That's right.

4 THE COURT: So that we have just one full
5 record, and that everybody is agreeing upon what we
6 have. All right?

7 MR. SIMON: Understood, Judge.

8 THE COURT: So, Mr. Chatrie, I apologize that
9 we go through these proceedings and talk about you in
10 the third person the whole time, but I want you to
11 know that obviously we're doing that because that's
12 how it's supposed to work. Your attorneys are
13 speaking on your behalf, and I can see that you have
14 been engaged exactly as you should be during this
15 process. And I want to be sure that you stay in close
16 contact with your attorneys so that you can ask them
17 any questions about what's going forward.

18 They have been very good about letting me
19 know anything that they think needs to be addressed,
20 either they think themselves and/or you want them to
21 say that. So I definitely want you to continue to be
22 engaged in that process.

23 And I appreciate everybody's hard work. I
24 appreciate everybody who had to stay late. I think
25 it's better to finish tonight, but I am aware, for

1 instance, Mr. Chatrie, you still have a drive, which
2 means other folks are driving with you. So I just
3 please ask, be safe, and thank you for your good work.
4 All right?

5 THE DEFENDANT: Thank you, Your Honor.

6 (The proceedings were adjourned at 7:30 p.m.)
7

8 I, Diane J. Daffron, certify that the foregoing is
9 a correct transcript from the record of proceedings
10 in the above-entitled matter.

11

/s/

12

DIANE J. DAFFRON, RPR, CCR

DATE

13

14

15

16

17

18

19

20

21

22

23

24

25

This page intentionally left blank for double-sided pagination and printing