

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA

- - - - - x

THE UNITED STATES OF AMERICA,

Plaintiff,

vs.

MICHAEL A. SUSSMANN,

Defendant.

- - - - - x

Criminal Action No.  
1:21-cr-00582-CRC-1  
Tuesday, May 17, 2022  
9:07 a.m.

**\*MORNING SESSION\***

---

TRANSCRIPT OF JURY TRIAL  
HELD BEFORE THE HONORABLE CHRISTOPHER R. COOPER  
UNITED STATES DISTRICT JUDGE

---

APPEARANCES:

For the United States:

**ANDREW DeFILIPPIS, ESQ.**  
**JONATHAN EDGAR ALGOR, IV, ESQ.**  
**MICHAEL T. KEILTY, ESQ.**  
**BRITTAIN SHAW, ESQ.**  
**SPECIAL COUNSEL'S OFFICE**  
145 N Street Northeast  
Washington, DC 20002  
(212) 637-2231

For the Defendant:

**SEAN M. BERKOWITZ, ESQ.**  
**MICHAEL BOSWORTH, ESQ.**  
**CATHERINE YAO, ESQ.**  
**NATALIE HARDWICK RAO, ESQ.**  
**LATHAM & WATKINS LLP**  
1271 Avenue of the Americas  
New York, NY 10020  
(212) 906-1200

Court Reporter:

Lisa A. Moreira, RDR, CRR  
Official Court Reporter  
U.S. Courthouse, Room 6718  
333 Constitution Avenue, NW  
Washington, DC 20001  
(202) 354-3187

## I N D E X

WITNESSPAGE**SPECIAL AGENT DAVID MARTIN**

(By Ms. Shaw) ..... 316

(By Mr. Bosworth) ..... 348

(By Ms. Shaw) ..... 358

**SPECIAL AGENT SCOTT HELLMAN**

(By Mr. DeFilippis) ..... 360

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

THE COURTROOM DEPUTY: Good morning, Your Honor.  
We're on the record for Criminal Case 21-582, *United States of America vs. Michael Sussmann*.

THE COURT: All right. Good morning, everybody.  
Just give me a second to get situated up here.

(Pause)

THE COURT: Okay.

MR. DeFILIPPIS: Good morning, Your Honor. Just  
to enter our appearances: Andrew DeFilippis, Brittain Shaw,  
Jonathan Algor, and Michael Keilty for the government this  
morning.

THE COURT: Okay. Good morning, everybody.

Mr. Durham, welcome. I didn't say hello  
yesterday.

MR. DURHAM: Thank you. Good morning.

MR. DeFILIPPIS: Your Honor, just a couple of  
preliminary matters from the government.

One is we wanted to inform the Court and the  
defense that we learned last evening that Dr. Manos  
Antonakakis, who is on our witness list, has decided to  
invoke his Fifth Amendment right, and so we will not be  
calling him as a witness.

We also just wanted to flag for the Court that  
Ms. Kori Arsenault, our paralegal who will be sitting at

1 counsel table throughout the trial, will likely serve as a  
2 summary witness, and so we just want to get the Court's  
3 permission, without objection from the defense, that she can  
4 both serve as a summary witness and sit at counsel table.

5 THE COURT: That's fine.

6 MR. DeFILIPPIS: Thank you, Your Honor.

7 THE COURT: All right.

8 All right. I think we still have a couple of  
9 straggler jurors. With 16 that may be more of a problem  
10 than usual.

11 All right. There are a couple of evidentiary  
12 issues that are on my plate. Who wants to address the  
13 expert supplemental notifications?

14 MR. DeFILIPPIS: Your Honor, very briefly, these  
15 are the issues that the defense has flagged. First, I think  
16 the main issue that they addressed in their motion is that  
17 they object to testimony from Special Agent Martin to the  
18 effect that what -- to the -- testimony that would describe  
19 what it is that DNS data or look-ups can allow one to  
20 conclude and what they cannot allow one to conclude.

21 We intend, through Special Agent Martin, to keep  
22 that discussion completely unconnected to the facts of this  
23 particular case. So, for example, Your Honor, we expect  
24 that Special Agent Martin will say that by looking at a DNS  
25 look-up alone one cannot tell whether an email was actually

1 sent, whether a communication actually occurred. And that,  
2 Your Honor, is not in any way controversial. It's not  
3 opining on the facts of this case, or even on any particular  
4 data.

5 All it's doing, Your Honor, is to explain to the  
6 jury what DNS data is and what a person can conclude from  
7 the existence of that data alone. And I think that's  
8 important for them to understand.

9 THE COURT: Okay. I don't hear the defense to  
10 object to that; in other words, Subcategories 1 through 3.  
11 It's sort of 4 through 9, which deal with a concept or  
12 several different concepts.

13 And as I understand it, you know, there are --  
14 there's an almost infinite amount of DNS traffic in the  
15 world; and if someone collects a sample data set of traffic  
16 to or from a particular domain name, the conclusions that  
17 can be drawn from that data set will depend upon how that  
18 sample size compares to the universe of DNS data that is out  
19 there. And that strikes me as a matter of statistics,  
20 whether the sample size is representative enough to draw  
21 conclusions from. I think I get that.

22 You know, if you wanted to know how many three-  
23 pointers Seth Curry hit in a season, you'd want access to  
24 all of his games, not just 10 games or 20 games or home  
25 games, right?

1           And so, you know, that doesn't sound terribly  
2       controversial to me, but I guess the question for this case  
3       is, you know, how is that rooted in what the FBI actually  
4       included or looked at or drew conclusions from in this case?

5           I mean, I take it that the ultimate goal is to  
6       show that the visibility or the data coverage or the sample  
7       size somehow affected the trajectory of the investigation.  
8       Is that ultimately what this is going to be used to show?

9           MR. DeFILIPPIS: So I think -- and you're right,  
10      Your Honor, that was the -- we understood them to flag the  
11      first, but also this issue.

12           I think all we expect Special Agent Martin to do  
13      is explain the concept of visibility to the jury. And the  
14      reason why he needs to explain that for the jury to evaluate  
15      materiality is because whenever the Bureau investigates data  
16      that it has received -- and particularly DNS data -- the  
17      insight or lack of insight one has into the visibility of  
18      that data -- in other words, you know, is this 2 percent of  
19      available traffic or 90 percent? -- in evaluating the data  
20      itself, that is a concept that the Bureau has to consider.  
21      And so it goes to the materiality of the origins of that  
22      data.

23           THE COURT: Well, but isn't the question here  
24      whether a case agent -- is your case agent later going to  
25      testify that that was something that the FBI looked at or

1 wanted to look at in this case and was unable to do so, and  
2 that that negatively affected the FBI's investigation in  
3 some way?

4 MR. DeFILIPPIS: Yes, and I expect Special Agent  
5 Hellman, who will testify likely today, Your Honor, I expect  
6 that that is a concept that he will say was relevant to the  
7 determination that -- determinations he was making as he  
8 drafted analysis of the data that came in.

9 And, again, I don't think we -- for example,  
10 another way in which this comes up is that the FBI routinely  
11 receives DNS data from various private companies who collect  
12 that data, and it is always relevant sort of the breadth of  
13 visibility that those companies have. So it's relevant  
14 generally, but also in this particular case the fact that  
15 the FBI did not have insight into the visibility or lack of  
16 visibility of that data certainly affected steps that the  
17 FBI took.

18 THE COURT: Okay. But Mr. Sussman has not  
19 been accused of misrepresenting who the source is. He's  
20 simply -- but rather who the client is. So how do you link  
21 that to the materiality of the alleged false statement?

22 MR. DeFILIPPIS: Because, Your Honor, I think we  
23 view them as intertwined. It was because -- it was in part  
24 because Mr. Sussman said he didn't have a client that made  
25 it more difficult for the FBI to get to the bottom of the

1 source of this data or made it less likely they would, and  
2 so -- and, again, I don't think we expect to dwell for a  
3 long time on this, but I think the agents and the technical  
4 folks will say that that is part of why the origins of the  
5 data are extremely relevant when they took investigative  
6 steps here.

7 THE COURT: Okay.

8 MR. DeFILIPPIS: And I would note one more  
9 thing --

10 THE COURT: There's also a reference to testimony  
11 about spoofing of data. Is there going to be any testimony  
12 that this data was spoofed or that the FBI analyzed the data  
13 and concluded that because it was spoofed it undermined the  
14 support for the allegation?

15 MR. DeFILIPPIS: Yes. So, today, Your Honor,  
16 we -- Special Agent Hellman --

17 THE COURT: And tell me what "spoofed" means in  
18 lay terms.

19 MR. DeFILIPPIS: So "spoofed," Your Honor, refers  
20 to the concept that it's always a possibility, when you look  
21 at DNS data, that it was intentionally created to create the  
22 appearance of look-ups or transactions between two computers  
23 or two IP addresses, but that those did not, in fact, occur.

24 And Special Agent Hellman, when he testifies  
25 today -- now, Your Honor's ruling we understand to permit us



1 to put into evidence anything about what the FBI analyzed  
2 and concluded as its investigation unfolded because that  
3 goes to the materiality of the defendant's statement. So  
4 Special Agent Hellman -- through Agent Hellman we will offer  
5 into evidence a paper he prepared when the data first came  
6 in, and among its conclusions is that the data might -- he  
7 doesn't use the word "spoof" -- but might have been  
8 intentionally generated and might have been fabricated.  
9 That was the FBI's initial conclusion in what it wrote up.

10 So in order for the jury to understand the course  
11 of the FBI's investigation and the conclusions that it drew  
12 at each stage, those concepts are at the center of it.

13 THE COURT: Did the FBI ultimately determine that  
14 the data was fabricated in any way?

15 MR. DeFILIPPIS: It ultimately did not reach a  
16 conclusion on that.

17 You know, as you know, the CIA --

18 THE COURT: So that did not bear on its conclusion  
19 that the allegations were not substantiated?

20 MR. DeFILIPPIS: Your Honor, I think we'll have  
21 to -- we'll ask Agent Hellman that. I think it certainly  
22 was part of the mix.

23 The lack of visibility into the authenticity of  
24 that data -- in other words, the lack of confidence they  
25 were able to establish that it was real data -- certainly

1 contributed to the final conclusions of the investigation.

2 THE COURT: We spent a lot of time, Counsel,  
3 talking about data accuracy, and this strikes me as now  
4 getting into whether data was falsified or not. And with  
5 the defense's representation that it will not suggest that  
6 there was a link based on the data, I thought that at  
7 least -- that sounds, to me, out of bounds.

8 MR. DeFILIPPIS: Okay. Your Honor, I'm sorry. We  
9 understood your ruling to be that the FBI's conclusions as  
10 it went along were okay as long as we weren't asserting the  
11 conclusion that it was, in fact, fabricated.

12 You know, I mean, it's difficult to chart the  
13 course of the FBI's investigation unless we can elicit at  
14 each stage what it is that the FBI concluded.

15 THE COURT: All right. Mr. Bosworth. I'm sorry,  
16 Mr. Bosworth.

17 MR. BOSWORTH: Yes, Your Honor. And I think the  
18 colloquy you were just having gets to the central concern,  
19 which is based on the proof that we think that the  
20 government is trying to elicit, including what they're now  
21 trying to elicit from the expert. They're using the ruling  
22 that they can get into the ultimate conclusions the FBI drew  
23 as a back door to showing why the data was inaccurate.

24 The concern here is that if they can start  
25 offering expert testimony on when data can be fabricated or

1 not, if they can start offering testimony on, you know, how  
2 strong the data is, if they can elicit from an agent --

3 THE COURT: Just on the sample size strength of  
4 the data.

5 MR. BOSWORTH: Yes.

6 THE COURT: I mean, do you contest that? Those  
7 seem pretty uncontroversial propositions.

8 MR. BOSWORTH: It is uncontroversial, and the FBI  
9 never asked about it.

10 So it is true, right, that the strength of the  
11 conclusions would depend on the volume of the data, where  
12 the data came from. The FBI never asked. They never asked  
13 Mr. Sussman. They never said, "Who are these cyber experts?  
14 Where did they get this stuff from?"

15 So it is true, and it is an uncontestable  
16 proposition, but they never asked about it here.

17 And obviously, if Your Honor lets in that  
18 testimony, we can deal with it on cross-examination and  
19 argument, but it is a little curious now with, you know,  
20 this range of expert testimony about the strength, you know,  
21 of the conclusions you can draw based on the sample size of  
22 the DNS data. To have that argument when that was never  
23 anything that they looked into during the investigation just  
24 feels a little weird.

25 THE COURT: Okay. I'll allow the testimony about

1 the statistical shortcomings or contours of the DNS data. I  
2 will not allow him to talk about whether it's fabricated or  
3 spoofed. I think that definitely encroaches on the Court's  
4 order regarding the data, and I think it's a little  
5 inconsistent with how the government has represented  
6 previously that it was not challenging or would not be  
7 contending that the data was false. And so I don't want to  
8 get into that.

9 But in terms of the statistical significance and  
10 how that might relate to the weakness or the strengths of  
11 the conclusions that one can draw from the data, I think  
12 that's fair game.

13 All right. On -- go ahead.

14 MR. DeFILIPPIS: Your Honor, just --

15 THE COURT: And the defense can deal with that in  
16 cross.

17 MR. DeFILIPPIS: Yes. Logistically, Your Honor,  
18 we do have the paper I referenced, which the agent prepared,  
19 which we intended to offer into evidence. I guess we would  
20 propose, then, that the portion of the paper that discusses  
21 that issue, the potential fabrication or spoofing, we would  
22 redact?

23 THE COURT: Yes.

24 And is there any objection to the paper coming in?

25 MR. BERKOWITZ: Your Honor, we had raised this

1 issue with Mr. DeFilippis last night. It may actually be  
2 worthwhile for the Court to take a look at it. It's about a  
3 two-and-a-half-page paper.

4 The high-level conclusions we certainly have no  
5 objections coming in, too; in other words, the top of it and  
6 the fact that they draw certain conclusions and close it out  
7 and pass it along.

8 There's some level of detail that I want to review  
9 closer. We had raised the fabrication point, and why don't  
10 we take a crack at seeing if we can agree --

11 THE COURT: Okay.

12 MR. BERKOWITZ: -- as to what it looks like; and  
13 if not, we'll raise it with you, Your Honor.

14 THE COURT: Sounds good.

15 MR. BERKOWITZ: Wonderful.

16 THE COURT: All right. And on Mr. Steele?

17 MR. DeFILIPPIS: I'm sorry, Your Honor, did you  
18 want to hear from the government?

19 THE COURT: Yes, just a few questions.

20 I guess the question -- the basic question is what  
21 testimony do you want to elicit about him; and what  
22 documents, if any, do you want to try to introduce and  
23 through whom?

24 MR. DeFILIPPIS: Yes.

25 THE COURT: I know there's been a lot of talk

1       about the general topic, but what is it exactly you want to  
2       get in?

3               MR. DeFILIPPIS:  So I think it would come down  
4       mainly to this, Your Honor.  First, the defendant, in his  
5       testimony before Congress, described his meeting with  
6       Mr. Steele at Perkins Coie, so when we read in his testimony  
7       into evidence, likely pursuant to a stipulation, we would  
8       propose to cover that portion of the testimony.

9               Second, when Mr. Priestap testifies, the same page  
10       of notes that contains the notes we're all familiar with  
11       about the Alfa-Bank matter also contains a series of notes  
12       reflecting the receipt of the Steele dossier information by  
13       FBI headquarters on the same day.

14              THE COURT:  And when you say "the Steele dossier  
15       information," do you mean the entire dossier or just the  
16       parts of the dossier that relate to Alfa-Bank?

17              MR. DeFILIPPIS:  So I think what we would elicit  
18       through him is that -- so the dossier's drafting continued  
19       after September 19th and actually continued even after the  
20       election, so it was a portion of the dossier.

21              We would intend only to elicit from Mr. Priestap  
22       the fact that the dossier or some portion of the dossier  
23       came into FBI headquarters on that day.  I don't think we  
24       would offer --

25              THE COURT:  So you're not offering the dossier or

1 a redacted version of the dossier. You just want to connect  
2 the dots between Mr. Sussman and Mr. Steele through the  
3 meeting, and the fact that the FBI received similar  
4 allegations in the form of a dossier?

5 MR. DeFILIPPIS: Correct. And I think, Your  
6 Honor, we -- in that testimony, we probably would not even  
7 have Mr. Priestap testify to the specific content of any  
8 dossier report, just to reflect its receipt. And I think  
9 the notes reflect that they were aware that it was prepared  
10 by an opposition research firm, Fusion GPS, at the behest of  
11 a law firm, so we would elicit that sort of --

12 THE COURT: And the evidentiary purpose would be  
13 to bolster your motive?

14 MR. DeFILIPPIS: I think motive, Your Honor. Also  
15 materiality. Because the notion is that if the Bureau knew  
16 that the same campaign and the same law firm and the same  
17 investigative firm were presenting the Alfa-Bank matter and  
18 the Steele matter at essentially the same time, it would  
19 have affected their views of those materials and the steps  
20 they took.

21 THE COURT: Okay.

22 MR. DeFILIPPIS: And then we may, Your Honor --  
23 with Mr. Elias today, we may elicit broadly Mr. Elias's role  
24 in, of course, retaining Fusion GPS, but also the Steele  
25 dossier's role in that broader project. Again, without

1 going into any specifics of any reports.

2 And then finally, Your Honor, we would -- likely  
3 through an FBI agent -- seek to either elicit or offer into  
4 evidence the dossier report that references Alfa-Bank, but  
5 no other dossier reports.

6 THE COURT: And is this the same dossier report  
7 that Mr. Priestap received?

8 MR. DeFILIPPIS: Your Honor, I would have to check  
9 which reports came in on which day, but I don't think he  
10 would be able to speak to the granularity of that either.  
11 In other words, I don't think he will know whether that  
12 report came in on a particular day.

13 I mean, it does bear a -- it has a date on it, I  
14 think, of September 14th, but --

15 THE COURT: And is that report the same as White  
16 Paper 3?

17 MR. DeFILIPPIS: No. In fact, it doesn't speak to  
18 data or even a secret server. What it speaks to is  
19 Alfa-Bank's reported ties to the Kremlin.

20 THE COURT: Mr. Berkowitz?

21 MR. BERKOWITZ: Judge, this would be an incredibly  
22 prejudicial and damaging line of questioning and evidence  
23 that is wholly disconnected from relevance. The facts that  
24 will come in at trial are as follows:

25 Mr. Sussman, on or about July 29th of 2016, was



1       asked to, quote, vet Mr. Steele in a meeting at Perkins  
2       Coie's offices. I believe he testified largely to that  
3       before Congress.

4               THE COURT: Okay. Well, I understand that.

5               MR. BERKOWITZ: Yes.

6               THE COURT: But he met with him.

7               MR. BERKOWITZ: Correct.

8               THE COURT: And the government may suggest that  
9       the purpose of the meeting was other than to vet. And so  
10      why isn't that -- at least the meeting and any activities  
11      that Mr. Sussman and Mr. Steele were involved in together or  
12      that Mr. Sussman was knowledgeable of, why isn't that the  
13      subject of cross-examination?

14              MR. BERKOWITZ: So, first of all, which witness  
15      are we going to cross-examine about that? Mr. Steele is not  
16      testifying.

17              There is no evidence, that I'm aware of, that will  
18      come in that says what they spoke about or that Alfa-Bank  
19      even came up in that meeting. No evidence.

20              Number two, the evidence related to the Steele  
21      dossier that they say arrived in Mr. Priestap's --

22              THE COURT: Was Mr. Elias at the meeting?

23              MR. BERKOWITZ: I don't -- I believe Mr. Elias's  
24      testimony will be he doesn't recall being at that meeting.

25              Number two, Mr. Priestap's undated notes

1 suggesting receipt from a foreign intelligence source of a  
2 Steele dossier are accurate. What they are trying to do is  
3 to suggest that it was somehow coordinated.

4 What Mr. DeFilippis left out is that, in unrelated  
5 testimony that will not come in in this court, Mr. Steele  
6 has talked about the fact that he was a British intelligence  
7 agent known as Crown who provided the information to  
8 British intelligence in his capacity as a confidential  
9 source for them, and British intelligence passed it along to  
10 the FBI several days before or weeks before, and it landed  
11 on Mr. Priestap's desk on or around the same time.

12 THE COURT: And you can't get that in?

13 MR. BERKOWITZ: We can't get it in. Neither can  
14 they. And so the suggestion that there was some coordinated  
15 effort is actually inconsistent with what we believe the  
16 evidence is.

17 If Mr. Steele were here, it would be a different  
18 kettle of fish, but the suggestion that there is this --  
19 that the Steele dossier was part of some larger conspiracy  
20 is just not true, number one.

21 And more importantly, there's not any evidence,  
22 other than inference, that Mr. Sussman met on one day with  
23 Mr. Steele and all of a sudden all of the work that  
24 Mr. Steele does that has any Alfa issues all of a sudden  
25 becomes relevant in the trial against Mr. Sussman for motive

1 evidence.

2 And the absence of their ability to tie it up and  
3 establish a direct connection is not prejudicial, but will  
4 leave a misleading impression on the jury of the  
5 connections.

6 THE COURT: All right. I'm going to reserve on  
7 this. Don't open on Steele. I will likely allow you to ask  
8 Mr. Elias about that meeting to the extent that he  
9 remembers.

10 I'm not inclined to let in the dossier, and I want  
11 to go back and read the testimony regarding how the  
12 information came to the FBI, okay?

13 MR. DeFILIPPIS: Your Honor, I apologize. Just  
14 two very quick factual points because I just want to make  
15 sure the Court has an accurate understanding.

16 It is not the case that the dossier came to the  
17 FBI through British intelligence. Mr. Steele gave it to an  
18 FBI agent in Rome, and it made its way from that agent to  
19 FBI headquarters. Mr. Steele was, we understand, in  
20 communication with Fusion GPS about that, but it did not  
21 come through British intelligence.

22 THE COURT: Okay. Let me just ask this question.  
23 Can the government proffer any evidence that the report was  
24 given to Mr. Priestap as part of the oppo research effort  
25 that we've all been talking about as opposed to through

1 British intelligence or another source?

2 MR. DeFILIPPIS: Your Honor, I think what we --

3 THE COURT: And is the jury just going to  
4 speculate about how it got there?

5 MR. DeFILIPPIS: Two things, Your Honor.

6 One, Ms. Seago, who will testify either today or  
7 tomorrow, will say that she met with Christopher Steele. So  
8 certainly there will be evidence in the record that this was  
9 part of Fusion GPS's opposition research. They, in fact,  
10 hired Mr. Steele.

11 And secondly, the very same testimony that  
12 Mr. Berkowitz just cited of Christopher Steele in an  
13 overseas proceeding, in that same testimony he said that the  
14 first time he learned about the Alfa-Bank secret server  
15 allegations was in that meeting with Mr. Sussman when,  
16 number one, he said Mr. Sussman told him about the  
17 allegations; and, number two, he testified that immediately  
18 after that meeting Fusion GPS tasked him to write a paper, a  
19 dossier report, about Alfa-Bank.

20 So while we are not going to call Mr. Steele at  
21 trial, in terms of proffering to the Court, we certainly  
22 have strong suggestion that it was, at least in part, very  
23 much part of the Fusion GPS opposition research effort.

24 THE COURT: Okay. And does the Court have that  
25 foreign testimony?

1           MR. DeFILIPPIS: I don't think you do, Your Honor,  
2 but we are happy to get it to you.

3           THE COURT: If you could give that to me.

4           MR. DeFILIPPIS: Sure, sure.

5           MR. BERKOWITZ: And, Your Honor, we'll provide you  
6 with the public document that we were referring to in terms  
7 of his acting as a British intelligence source and so forth,  
8 so you'll have that as well.

9           THE COURT: Please do. Thank you.

10          All right. Is the jury ready?

11          THE COURTROOM DEPUTY: Yes.

12          THE COURT: We're going to bring them in. I will  
13 give them the standard preliminary instructions. There was  
14 one small dispute in the parties' suggestions with respect  
15 to the instructions.

16          Mr. DeFilippis, you don't want me to say that the  
17 indictment alleges that he was acting on behalf of specific  
18 clients and then name those clients? Isn't that exactly  
19 what the indictment alleges?

20          MR. DeFILIPPIS: Your Honor, if we had such an  
21 objection, we'll drop it.

22          THE COURT: Very well. Okay.

23          You can bring them in.

24          (Jury enters courtroom)

25          THE COURT: Good morning, ladies and gentlemen.

1 JURORS IN UNISON: Good morning.

2 THE COURT: You all came back. I hope you had a  
3 good evening and are ready to go.

4 Before we begin opening statements in the case,  
5 I'd like to give you a few preliminary instructions just to  
6 explain how the trial will work and some of the ground rules  
7 that we'll follow for the next two weeks. These  
8 instructions are no substitute for the detailed legal  
9 instructions that I will give you at the end of the trial,  
10 but, again, they're just intended to give you a sense of  
11 what will be going on in the courtroom and what your  
12 responsibilities as jurors will be.

13 Now, the first thing you should notice is that  
14 each one of you has been given a notebook. Some jurors find  
15 it useful to take notes; some find it distracting. It is  
16 entirely up to you whether to take notes or not. If you do  
17 take notes, feel free to write down whatever you'd like.

18 The notebooks will be locked in the courtroom  
19 during recesses and overnight and will be destroyed at the  
20 end of trial, so you should not worry about anyone ever  
21 seeing what you write in your notebook.

22 As I noted yesterday, there are 16 of you, but  
23 only 12 of you will wind up deliberating in this case.  
24 Usually there are only two alternates, but, because of the  
25 COVID risks and some other factors, we have decided to

1 expand that number to four alternates for this particular  
2 trial. The four alternate seats were randomly selected  
3 before we picked the jury. I will not disclose to anyone  
4 who the alternates are until the end of my final  
5 instructions and before the jury begins its deliberations.

6 And any of the seats could be alternate seats. It  
7 could be the far four over there, the far four over here, or  
8 any number in the middle. So because any seat could be the  
9 alternate seat, you should think of yourselves as regular  
10 jurors and give this case your fullest and most serious  
11 attention during trial.

12 As I explained yesterday, this is a criminal case  
13 that began when a grand jury issued an indictment. The  
14 defendant, Michael Sussmann, is being tried on a single  
15 criminal charge: that he willfully and knowingly made a  
16 materially false, fictitious, and fraudulent statement or  
17 representation in a matter before the Federal Bureau of  
18 Investigation; namely, that Mr. Sussman stated to the  
19 general counsel of the FBI that he was not acting on behalf  
20 of any client in conveying particular allegations, when, in  
21 fact, he was acting on behalf of two specific clients,  
22 namely Rodney Joffe and the Hillary Clinton Campaign.

23 Mr. Sussman has pled not guilty to that charge.

24 At the end of the trial, you will have to decide  
25 whether or not the evidence presented has convinced you

1       beyond a reasonable doubt that Mr. Sussman committed this  
2       offense.

3               To prove the offense, the government must prove  
4       beyond a reasonable doubt each element of the charged  
5       offense. I will give you instructions on those elements at  
6       the end of the case.

7               You should understand that the indictment that I  
8       just summarized is not evidence. The indictment is just a  
9       formal way of charging a person with a crime in order to  
10      bring him or her to trial. You must not think of the  
11      indictment as evidence of the guilt of the defendant just  
12      because he has been indicted. And, again, at the end of the  
13      trial you will have to decide whether the government has  
14      proven each element beyond a reasonable doubt.

15              Every defendant, including Mr. Sussman, is  
16      presumed to be innocent. This presumption remains  
17      throughout the trial unless and until he is proven guilty  
18      beyond a reasonable doubt. The burden is always on the  
19      government.

20              If the government proves each element of the  
21      offense beyond a reasonable doubt, it is your duty to find  
22      Mr. Sussman guilty of the offense. But if you find the  
23      government has not proven one or more element of the  
24      offense, you must find Mr. Sussman not guilty.

25              Now, throughout the trial you will hear me refer



1 to the government or the Special Counsel. When I do that, I  
2 mean the prosecution team or one of the lawyers from the  
3 Special Counsel's Office. And I know they introduced  
4 themselves yesterday, but why don't we have Ms. Shaw  
5 introduce the prosecution team again.

6 MS. SHAW: Thank you, Your Honor.

7 Good morning. My name is Brittain Shaw. I'm  
8 joined at counsel table with Andrew DeFilippis, Jonathan  
9 Algor, Michael Keilty, John Durham, and Kori Arsenault.

10 Thank you, Your Honor.

11 THE COURT: And when I refer to the defense, I  
12 mean the defendant or defense counsel or any other member of  
13 the defense team.

14 Mr. Berkowitz?

15 MR. BERKOWITZ: Good morning. Nice to see  
16 everybody again.

17 As I said yesterday, my name is Sean Berkowitz,  
18 and I, along with Michael Bosworth, Natalie Rao, and  
19 Catherine Yao have the privilege of representing Michael  
20 Sussmann, who is present in court at the end of the table.

21 Thank you.

22 THE COURT: All right. So the trial will proceed  
23 over the next couple of weeks in four stages.

24 First will be opening statements. The government  
25 will begin with its opening statement, and I believe the

1 defendant will give an opening statement thereafter. The  
2 opening statements by the lawyers are not evidence. They  
3 are intended simply to give you a roadmap or a preview of  
4 what the evidence or what each side thinks the evidence will  
5 show.

6 The second stage is the presentation of evidence.  
7 The government will begin with what we call its case-in-  
8 chief. They will call witnesses. An attorney will conduct  
9 a direct examination of a witness, followed by cross-  
10 examination by the other side, and a brief redirect  
11 examination by the government.

12 After the government's case, the defense may, but  
13 is not required to, put on its case-in-chief. If it does,  
14 it will follow the same order: direct examination, cross-  
15 examination, and redirect.

16 The government may then choose to bring a brief  
17 rebuttal case.

18 During the presentation of evidence, the lawyers  
19 will be asking questions. Like their opening statements,  
20 their questions are not evidence. The only evidence is the  
21 sworn testimony of witnesses and exhibits or documents  
22 admitted into evidence.

23 The third stage of the case will be instructions  
24 on the law, and that's when I will give you detailed  
25 instructions that you will use during your deliberations.

1           The fourth stage will be closing arguments, again,  
2           in the same order: the government, the defense, and then a  
3           brief rebuttal by the government. Like the other arguments,  
4           closing arguments are not evidence. They are only intended  
5           to help you understand what the evidence has shown from each  
6           side's perspective.

7           I will then give you a few final instructions, and  
8           you will begin your deliberations.

9           My responsibilities are to run a fair and  
10          efficient trial, to rule on legal questions that arise  
11          during the trial, and to instruct you on the law. It is  
12          your sworn duty to accept the law as I instruct.

13          For your part, you -- and only you -- are the  
14          ultimate deciders of the facts in this case. You will weigh  
15          the evidence, and you will judge the credibility and the  
16          believability of the witnesses.

17          You are likely to hear me sustain an objection --  
18          or occasionally attorneys will object to questions by the  
19          other side or the admission of evidence by the other side.  
20          Occasionally I will sustain an objection. If I do that, the  
21          question must be withdrawn, and you must not speculate what  
22          the witness's answer would be.

23          If the witness has already answered a question, an  
24          objection to which I have sustained, I will strike that  
25          answer from the record, and you are to disregard what the

1 witness said.

2 If I overrule an objection, that means the  
3 question stands, and the witness must answer the question.

4 When the parties object to a question or to the  
5 admission of evidence, they are simply doing their jobs. Do  
6 not fault one side or the other for objecting more or less  
7 to the other side's questions.

8 As I will continue to remind you throughout the  
9 trial, it is very important that you not discuss the case  
10 with anyone, including your fellow juror members. Also  
11 avoid listening to or reading anything about the case.

12 We're all going to be in the same courthouse for  
13 the next couple of weeks, and it seems like a big building,  
14 but you are likely to run into folks in the hall. There are  
15 lots of parties in this case. You may run into the  
16 defendant or into one or more of the lawyers or into folks  
17 on my staff. If the attorneys or anyone avoid contact with  
18 you, they are not being rude; they're just trying to observe  
19 the rules of the Court, so don't take any offense from that.

20 If you hear a conversation about the case in your  
21 presence, please let Ms. Jenkins or one of the marshals  
22 know, and we'll figure out how to deal with that.

23 I hope and expect not, but it is possible that you  
24 might be approached during trial by a member of the media.  
25 You are not to speak with anyone about the trial, including

1 the media, while the trial is ongoing. If you are  
2 approached, and it makes you feel uncomfortable saying no,  
3 please let me know that that has happened.

4 Once the trial is over, it will be up to you  
5 whether to talk about the trial and with whom.

6 Again, no independent research about the case or  
7 social media postings about the case.

8 Ms. Moreira here is our crack court reporter. She  
9 will be taking down everything that is said in open court,  
10 but you will not have a transcript of the trial back in the  
11 jury room when you begin your deliberations. You must rely  
12 on your memories and your notes, if you choose to take them.

13 All right? So with that, ladies and gentlemen,  
14 please pay close attention, and we will begin with the  
15 opening statement from, I believe, Ms. Shaw.

16 MS. SHAW: Thank you, Your Honor.

17 The evidence will show that this is a case about  
18 privilege: the privilege of a well-connected D.C. lawyer  
19 with access to the highest levels of the FBI; the privilege  
20 of a lawyer who thought that he could lie to the FBI without  
21 consequences; the privilege of a lawyer who thought that for  
22 the powerful the normal rules didn't apply, that he could  
23 use the FBI as a political tool.

24 Ladies and gentlemen of the jury, on September 19,  
25 2016, the defendant, Michael Sussmann, a high-powered D.C.

1 lawyer, went to the FBI bringing serious allegations about a  
2 presidential candidate on the eve of the election, serious  
3 allegations about secret communications with a foreign  
4 adversary. But when the defendant walked into FBI  
5 headquarters on Pennsylvania Avenue, the evidence will show  
6 that he bypassed normal channels. He went straight to the  
7 FBI general counsel's office, the FBI's top lawyer. He then  
8 sat across from that lawyer and lied to him. He told a lie  
9 that was designed to achieve a political end, a lie that was  
10 designed to inject the FBI into a presidential election.

11 What was the lie? The defendant told the FBI  
12 general counsel that he was bringing them information about  
13 a presidential candidate on his own, not on behalf of any  
14 client, but as a good citizen.

15 But the evidence will show that that wasn't true.  
16 The defendant wasn't there as a concerned citizen. He was  
17 doing it not for one client, but for two: the opposing  
18 presidential campaign and an Internet executive. The  
19 defendant lied to direct the power and resources of the FBI  
20 to his own ends and to serve the agendas of his clients.

21 Now, as the judge has just told you, the defendant  
22 is charged with one count of making false statements to the  
23 FBI; that is, for willfully and knowingly making a  
24 materially false statement to the general counsel of the  
25 FBI. And the government's evidence will show you beyond a

1 reasonable doubt that the defendant is guilty of that  
2 charge.

3 So let me briefly tell you what the evidence will  
4 show.

5 The evidence will show that on Sunday, September  
6 18th, the defendant, a powerful attorney at a major D.C. law  
7 firm, texted his friend, James Baker, who was the FBI's  
8 general counsel; like I said, its top lawyer. He texted  
9 Baker on Baker's personal cell phone, and he asked to meet  
10 Baker the next day. He told Baker he had something time-  
11 sensitive and sensitive he wanted to give to the FBI.

12 The defendant went on to write in this text that  
13 he was, quote, coming on his own, not on behalf of any  
14 client or company, unquote, and that he just wanted to,  
15 quote, help the Bureau, end quote.

16 You will see the text for yourselves. You will  
17 see that these are the defendant's own words.

18 Now, Baker had known the defendant since they  
19 served together at the Department of Justice years before,  
20 and so he agreed to meet with him on short notice. He  
21 agreed to meet with him on an urgent basis because he  
22 trusted him.

23 The evidence will further show that when the  
24 defendant met with the general counsel of the FBI, that that  
25 is when he committed the crime charged here.

1           The defendant lied to the FBI official's face.  
2       When they met, he told Baker again that he was not there on  
3       behalf of any client, that he just wanted to help the FBI.  
4       That is the false statement that's charged in the  
5       indictment.

6           The evidence will show that the defendant then  
7       proceeded to tell Baker that he had received information and  
8       data that supposedly showed a secret channel of  
9       communication between the Trump organization and a Russian  
10      bank called Alfa-Bank. The defendant told Mr. Baker that  
11      some cyber researchers had come upon this secret channel and  
12      that a major news outlet was set to run the story within  
13      days.

14          The evidence will show that the defendant gave  
15      Mr. Baker two thumb drives containing that data as well as  
16      white papers that describe the allegations. He gave him  
17      these thumb drives, and he left.

18          Now, you will hear from James Baker that after  
19      that meeting he came away thinking that Mr. Sussman had  
20      given this information to him as a good citizen, not on  
21      behalf of any client. You will learn that Baker and other  
22      high-ranking FBI officials promptly opened a case and  
23      directed FBI resources to investigate these serious  
24      allegations. They opened an investigation, an investigation  
25      that would later find that the server was merely a spam



1 email server used for sending out marketing emails. The  
2 server did not reflect a crime, nor was it a threat to  
3 national security.

4 But there was a crime in all of this: the  
5 defendant's lie to the FBI's general counsel. He lied to  
6 the FBI's general counsel saying he was not acting on behalf  
7 of any client.

8 The evidence will also show that the defendant was  
9 there not on behalf of just one client, but on two clients:  
10 the Hillary Clinton Campaign and an Internet executive named  
11 Rodney Joffe.

12 Now, before I talk about the evidence, let me  
13 address the proverbial elephant in the room.

14 Some people have very strong feelings about  
15 politics and about Russia, and many people have strong  
16 feelings about Donald Trump and Hillary Clinton. But we are  
17 not here because these allegations involve either of them,  
18 nor are we here because the defendant's client was the  
19 Clinton Campaign.

20 We are here because the FBI is our institution  
21 that should not be used as a political tool for anyone; not  
22 Republicans, not Democrats, not anyone. So whatever your  
23 political views might be, they can't be brought to your  
24 decisions that you will be asked to make in this courtroom.

25 Your task in this trial is straightforward. As

1 Judge Cooper explained to you, your role is to consider the  
2 evidence and apply the law as he instructs you. And I  
3 expect that one of the laws he will instruct you about is  
4 that under the law of the United States, if you make a  
5 knowingly materially false statement to the FBI, that's a  
6 crime. It's that simple.

7 So what will the evidence show? The evidence will  
8 show that defendant's lie was all part of a bigger plan, a  
9 plan that the defendant carried out in concert with two  
10 clients, the Hillary Clinton Campaign and Internet executive  
11 Rodney Joffe. It was a plan to create an October surprise  
12 on the eve of the presidential election, a plan that used  
13 and manipulated the FBI, a plan that the defendant hoped  
14 would trigger negative news stories and cause an FBI  
15 investigation, a plan that largely succeeded.

16 How did the defendant execute this plan? Through  
17 his two clients.

18 First, the Clinton Campaign. You're going to hear  
19 that in the summer of 2016, as the presidential election was  
20 heating up, the defendant was working at a major D.C. law  
21 firm which was acting as legal counsel for the Clinton  
22 Campaign. You're also going to find as part of -- hear that  
23 as part of their campaign efforts they were hired and were  
24 paying an investigative firm called Fusion GPS that was  
25 hired to do what's called opposition research.

1           Now, opposition research is something that happens  
2           in politics, and it has for years. Republicans do it.  
3           Democrats do it. There's nothing illegal about it.

4           You're going to learn that Fusion GPS was doing  
5           opposition research on behalf of the campaign, and through  
6           this their investigators and researchers were digging up any  
7           dirt they could find about the opposing candidate, Donald  
8           Trump. And when they found something that was dirty, they  
9           would plant it in the press and, ultimately, with the FBI.

10           This brings us to the defendant's second client,  
11           Rodney Joffe.

12           You're going to hear around the same time that  
13           Joffe and others were conducting their own kind of  
14           opposition research, but it was a different kind. The  
15           evidence will show that Joffe was a high-ranking executive  
16           at an Internet company and also had interests in other  
17           Internet companies. You will learn that Joffe and one of  
18           his companies used the defendant as their lawyer, and that  
19           they paid the defendant and his firm over a million dollars  
20           per year.

21           The evidence will show that given his position at  
22           these various Internet companies, Joffe had access to vast  
23           amounts of Internet traffic and data. That included what's  
24           known as DNS data, which stands for Domain Name System data.  
25           You will learn that DNS data is basically the digital trail

1       that's created when computers look each other up on the  
2       Internet in an effort to communicate. It's part of the  
3       trail that we all leave when we send emails or surf the  
4       Internet.

5               The evidence will show that in the summer of 2016,  
6       Joffe and others started using their access to huge amounts  
7       of Internet traffic to conduct opposition research. They  
8       started looking at the Internet for any information about  
9       the online activities of Trump, his associates, and certain  
10      family members.

11             The evidence will show that later Joffe gave this  
12      DNS data to the defendant. This was the data they would  
13      later claim showed that the Trump organization was  
14      supposedly using a secret email server to communicate with  
15      the Russian bank called Alfa-Bank.

16             The evidence will show that Joffe and the  
17      defendant knew that the server was a spam email server, but  
18      they also claimed that it was being used as a secret  
19      communication channel between the Trump organization and  
20      Russia.

21             Now, the evidence will show that the defendant saw  
22      this supposed data as a golden opportunity to deliver a big  
23      win for both of his clients and to influence a political  
24      election, and so he brought together his two clients, Joffe  
25      and the Clinton Campaign.

1           You will learn that the defendant put Joffe in  
2           touch with the top lawyer for the Clinton Campaign, and he  
3           also connected Joffe with the Fusion GPS research firm,  
4           which was also being paid by the Clinton Campaign. He  
5           arranged calls and meetings between the two.

6           That's where the defendant's plan took shape, and  
7           the evidence will show that the plan had three parts: a  
8           look, a leak, and a lie.

9           First the look.

10          The evidence will show that as Sussmann and Joffe  
11          met and coordinated with representatives of the Clinton  
12          Campaign and Fusion GPS, they looked for more data. You  
13          will hear that Joffe instructed people at his companies to  
14          scour Internet traffic for any derogatory information they  
15          could find about Trump or his associates' online Internet  
16          activities, including potential ties to Alfa-Bank or to  
17          Russia. And you will see that Fusion GPS did the same using  
18          their access to other information.

19          Second, the leak. You will hear from the evidence  
20          that the defendant and Joffe then leaked the Alfa-Bank  
21          allegations to a reporter at the *New York Times* with the  
22          hope and expectation that he would run a story about it.

23          Third, the lie. You will see that when the  
24          reporter didn't publish this story right away, the defendant  
25          and others decided to bring this information to the FBI and

1 to create a sense of urgency, to also tell the FBI that a  
2 major news organization was running a story within days.  
3 That's when the defendant requested the meeting with the FBI  
4 general counsel and told him that he was not doing this for  
5 any client.

6 The evidence will show you that the defendant had  
7 at least two reasons to lie.

8 First you're going to hear that the defendant was  
9 a cyber security lawyer who had been hired earlier that year  
10 by the Democratic National Committee to represent them in  
11 relation to a computer hack where they'd been the victim.  
12 Because of this, the defendant was in frequent contact with  
13 the FBI about the hack investigation. They considered him  
14 to be the DNS -- I mean, the DNC attorney for that matter.  
15 Because they viewed him as the DNC lawyer for the hack, the  
16 defendant knew that if he came in and told them that he was  
17 representing a political candidate at this time, weeks  
18 before an election, they might not meet with him right away,  
19 let alone open an investigation.

20 Second, the defendant knew that if he could get  
21 the FBI to investigate the matter and reach out to the press  
22 to try to stop the story, that that would make the story  
23 more attractive to the press, and they would report on it.

24 Now, all the while, ladies and gentlemen, the  
25 evidence will show that the defendant was billing his time

1 on this project to the Clinton Campaign. You will see the  
2 billing records that show that instead of being a good  
3 citizen, the defendant was billing his time to a client.  
4 The campaign was footing the bills.

5 And so when the defendant walked these allegations  
6 into the FBI and said he wasn't doing this for any client,  
7 that was false. It was false because the defendant  
8 personally billed his time to the Clinton Campaign, and it  
9 was false because he was also bringing these allegations on  
10 behalf of his other client, Rodney Joffe.

11 You are also going to hear that the defendant  
12 doubled down on his lie. Just five months later, the  
13 defendant got himself another meeting with a government  
14 agency. This time the CIA. At the CIA he brought the same  
15 allegations about Alfa-Bank along with some other  
16 allegations.

17 You will hear that in setting up that meeting, the  
18 defendant told a retired CIA employee that he was seeking a  
19 meeting on behalf of a client; but you will also hear that  
20 during the actual meeting he told the CIA he was not there  
21 on behalf of any client, the same lie the defendant told  
22 James Baker. And so in doing so, he confirmed the lie that  
23 he made to James Baker.

24 This was not a mistake or a slip of the tongue.  
25 It was a concerted effort to conceal his clients.

1           Finally, I also expect that you're going to hear  
2           that the defendant actually got caught in his lies when he  
3           was required to testify under oath before Congress in  
4           December 2017, and when he testified under oath, he was  
5           specifically asked about the meetings with the FBI and the  
6           CIA.

7           During that testimony, the defendant admitted that  
8           he'd carried out both of these meetings on behalf of a  
9           specific anonymous client. He was referring to Joffe. In  
10          other words, the defendant gave Congress something that he  
11          hadn't given the FBI, something that he hid from them.

12          But the evidence will show that the defendant hid  
13          something from Congress, too, which is when he approached  
14          the FBI's general counsel that day with the Alfa-Bank  
15          allegations. As the election was approaching, he billed his  
16          time on that matter not to the unnamed client, but rather to  
17          the Clinton Campaign. His own sworn testimony will prove to  
18          you that he lied to the FBI and that he's guilty in this  
19          case.

20          So what is the evidence? How are we going to  
21          prove to you that the defendant lied to the FBI?

22          Let me first mention, you may hear some of this  
23          evidence out of order. Testimony from witnesses might not  
24          be chronological. Just dealing with scheduling conflicts,  
25          complications from COVID, and so forth, it's a little like



1       air traffic control. But you will hear all the evidence,  
2       not just in this order I'm about to tell you.

3               Go back to the evidence.

4               You're going to have three types of evidence:  
5       documents, physical evidence, and, of course, witness  
6       testimony.

7               What will the documents show you?

8               You're going to see that the defendant put his lie  
9       in writing.

10              You're going to see his 42-word text to Baker the  
11       night before the meeting where he said he wasn't coming on  
12       behalf of any client or company.

13              You're going to see in black and white his billing  
14       records that show that the defendant billed his work on this  
15       project to the Clinton Campaign.

16              You're going to see emails and phone records that  
17       show that beginning in the summer of 2016 the defendant  
18       worked with Fusion GPS to develop the Trump/Alfa story and  
19       plant it in the press.

20              You will also see internal FBI records and emails,  
21       records that will show you that the defendant's lie  
22       mattered, how it misled the officials into thinking he was  
23       acting as a good citizen, causing them to take steps and  
24       devote resources to what was ultimately a spam email server  
25       and not a national security threat.

1           You're also going to hear from a number of  
2 witnesses.

3           You will hear from James Baker, the FBI general  
4 counsel to whom the defendant made this false statement.

5           You're also going to hear from two other officials  
6 who Baker briefed after his meeting with the defendant, the  
7 very same day it happened, and who memorialized what was  
8 said in their notes.

9           You will hear from the agents who investigated  
10 these allegations, what they did and what they found.

11          And you will hear from an FBI cyber expert who is  
12 going to explain to you the basics of DNS data and some of  
13 the terminology you might hear in the witness's testimony  
14 here.

15          You will also hear from employees of Joffe's  
16 company who Joffe tasked to search the Internet in support  
17 of defendant's plan.

18          You will hear from an employee of Fusion GPS who  
19 will tell you about Fusion's work on these issues.

20          And you will hear from an employee of the  
21 defendant's former law firm, who will help explain the  
22 firm's billing practices, procedures, and help you to  
23 understand the billing records you might see.

24          Finally, we have several pieces of physical  
25 evidence.

1           First, you're going to have a chance to review the  
2           handwritten notes of the two officials who met with James  
3           Baker the day of the meeting and who wrote down the  
4           defendant's lie based on a conversation with Baker.

5           Next you're going to have the two thumb drives the  
6           defendant gave to James Baker and the FBI that day, the two  
7           thumb drives he bought for the meeting, the two thumb drives  
8           he loaded with the data in the white papers, the two thumb  
9           drives which the evidence will show he charged to the  
10          Clinton Campaign.

11          Now, before I sit down, I want to go back to where  
12          I began.

13          This is a case about privilege. No one should be  
14          so privileged as to have the ability to walk into the FBI  
15          and lie for political ends.

16          Ladies and gentlemen, whether we are Democrats or  
17          Republicans, whether we hate Donald Trump or like him, we  
18          have to agree that some things have to be above politics.  
19          One of those things is our law enforcement agencies, and the  
20          other is the truth.

21          After you have heard all the evidence here, you  
22          will know the truth here; that the defendant lied to the  
23          FBI, and that it wasn't a trivial matter or a mistake. The  
24          evidence will show that this was a breach of trust between a  
25          citizen and a law enforcement agency whose mission is to

1 protect us from enemies both foreign and domestic. The FBI  
2 should never be used as a political pawn.

3 Thank you very much for your attention, and thank  
4 you for serving on this jury.

5 The government is going to have the opportunity to  
6 come back and speak with you again at closing argument, and  
7 you will hear Judge Cooper explain the law to you. At that  
8 time we will ask you to consider all of the evidence.

9 If you carry out your duties as Judge Cooper  
10 instructs you, we are confident that you will return the  
11 only verdict that is consistent with the law and consistent  
12 with the facts, that the defendant is guilty.

13 Thank you.

14 THE COURT: Thank you, Ms. Shaw.

15 Mr. Bosworth.

16 MR. BOSWORTH: Good morning.

17 JURORS IN UNISON: Good morning.

18 MR. BOSWORTH: And may it please the Court.

19 Michael Sussmann didn't lie to the FBI. Michael  
20 Sussmann wouldn't lie to the FBI. If we're thinking about  
21 the FBI as our institution, there is nobody who would agree  
22 with that statement more than Michael Sussmann.

23 Michael Sussmann is a serious national security  
24 and cyber security lawyer. For over a decade he worked  
25 right alongside the FBI as a federal prosecutor. For over

1 the next decade he worked alongside the FBI as a national  
2 security lawyer in private practice. For over two decades  
3 he had a top secret clearance, because that's how much the  
4 FBI trusted him.

5 And in the summer of 2016, this serious national  
6 security lawyer got information that raised serious national  
7 security concerns at a time when questions were swirling  
8 about Donald Trump's connections to Russia. One of his  
9 long-time clients, Rodney Joffe, who you heard a little bit  
10 about, came to him with information showing another  
11 potential connection between Trump and Russia, a connection  
12 that showed weird contacts between Donald Trump's business  
13 organizations and a Russian bank owned by Vladimir Putin's  
14 closest associates. And Mr. Sussman took that seriously  
15 because it came from Rodney Joffe.

16 Rodney Joffe is no Internet executive. Rodney  
17 Joffe is one of the world's leading cyber experts. He's one  
18 of the leading experts on DNS data, the very stuff that is  
19 at issue in this case. He is so trusted that our  
20 government, our institution, the FBI, made him -- asked him  
21 to be a confidential informant for the FBI. That's how much  
22 they trusted him. That's how much they relied on him.

23 And you think Mr. Sussman got a million dollars of  
24 business from Rodney Joffe's companies? Rodney Joffe got  
25 tens of millions of dollars from the federal government

1 giving them advice, selling them DNS data.

2 Rodney Joffe knew DNS data inside and out, and  
3 when he came to Michael Sussmann with that information,  
4 Michael Sussmann took it seriously. And Mr. Sussman agreed  
5 with Mr. Joffe to make this public.

6 The plan from the start was to go public with  
7 serious information so that the American people could decide  
8 for themselves what it showed. That was the plan, to go to  
9 the press.

10 And that's what they did. They went right to the  
11 top.

12 What you didn't hear is they took that information  
13 to a Pulitzer-Prize-winning reporter at the *New York Times*,  
14 and he was going to write a story about it. He met with  
15 Mr. Sussman. He met with Mr. Joffe. He researched the  
16 things that reporters do, and he was going to go with the  
17 story. He was going to go public with a big story about it.

18 And if Michael Sussmann hadn't spent a career  
19 working alongside the FBI, if Michael Sussmann didn't care  
20 about the FBI, we wouldn't be here because, at the last  
21 minute, when Mr. Sussman knew and heard and believed that a  
22 story was going to run about this, what did he do? He  
23 didn't keep his mouth shut. He didn't let the story come  
24 out. He went to the FBI.

25 And he went to the FBI to give them a heads up

1       that the story was coming. He gave them -- he went to the  
2       FBI so that -- to tell them that this story was coming so  
3       they wouldn't be caught flat-footed, so they wouldn't be  
4       caught by surprise. He went to the FBI to help the FBI,  
5       which is exactly what Mr. Sussman said in the text message  
6       he sent to Mr. Baker that started this whole thing off.

7               Now, you heard the evidence is going to show that  
8       this meeting was all about the Clinton Campaign. You will  
9       hear the meeting with the FBI is the exact opposite of what  
10      the Clinton Campaign would have wanted.

11             Was the Clinton Campaign generally one of  
12      Mr. Sussman's clients? Yes.

13             Was the Clinton Campaign a client on this effort  
14      to get a story in the press? Yes. There's nothing  
15      secretive about that.

16             But this FBI meeting was something very different.  
17      The FBI meeting was something that they didn't authorize,  
18      that they didn't direct him to do, and that they wouldn't  
19      have wanted him to do. Because you know what happened? As  
20      the evidence will show, when Mr. Sussman went to the FBI to  
21      tell them about this story, the FBI effectively shut it  
22      down. The exact opposite of what the Clinton Campaign would  
23      want. They'd want a big story that hurts Trump and helps  
24      them, and Mr. Sussman, by going to the FBI, shut that all  
25      down. He was there to help the FBI.

1           So what are we doing here? The government's  
2 theory doesn't make sense. The evidence will not support  
3 this charge, and today I want to walk through that evidence  
4 with you. I want to talk to you about what I think the  
5 evidence will show and what I think the evidence will not  
6 show, and I want to do it by focusing on four key questions.

7           First, what did Michael Sussmann actually say to  
8 the FBI? I'll answer that.

9           Second, is what he said false?

10          Third, did he intend to say something false?

11          Fourth, did it matter?

12          And I want to go through those one by one.

13          To convict Mr. Sussman here, the government has to  
14 prove beyond a reasonable doubt the answers to each of these  
15 questions. They've got to jump over each and every one of  
16 these hurdles. And I submit to you that they're going to  
17 stumble at every turn.

18          So here's how I want to use my time. I want to  
19 briefly talk through the story line and tell you some of the  
20 relevant evidence so you can get a better feel for what  
21 happened and why it was that Mr. Sussman ultimately met with  
22 the FBI. And then I want to walk through these four  
23 questions: What did he truly say? Was it false? Did he  
24 intend to say something false? Did it matter?

25          So let's get started, and let's get started with



1 two of the people who are most key here.

2 First, Mr. Sussman. Now, I told you a little bit  
3 about him, but I want you to hear a little bit more so you  
4 understand how nonsensical this charge is.

5 Put aside that Mr. Sussman's a good man or a  
6 family man. You will hear that Mr. Sussman is an honest  
7 man. He spent over 12 years working for the United States  
8 Department of Justice prosecuting crimes under Democrats and  
9 Republicans alike. Then he went to Perkins Coie, a private  
10 law firm that is one of the top hundred firms in the country  
11 that's been around for over a hundred years. And at Perkins  
12 Coie, Mr. Sussman became a prominent national security and  
13 cyber security lawyer, advising all sorts of clients about  
14 all sorts of issues.

15 Through that work he interacted with the FBI, the  
16 CIA, the government at the top levels. He trusted them, and  
17 they trusted him. That's why he had a top secret clearance.  
18 That's why he had a special badge that enabled him to walk  
19 in and out of the FBI and the CIA just like he was an  
20 employee. His whole livelihood depended on his credibility  
21 with these agencies, and he'd never throw that away.

22 You know who else had a relationship with the  
23 government? Rodney Joffe, the Internet executive who was  
24 the world's leading cyber expert, the world's leading expert  
25 on DNS data, who was an FBI confidential informant, who had

1 relationships up and down the government, who got paid tens  
2 of millions of dollars for DNS data, for his advice, because  
3 that's how much the government trusted him. That's how much  
4 they relied on him.

5 So in the summer of 2016, Mr. Joffe, this expert,  
6 came to Mr. Sussman for help. Again, at a time when there  
7 were all sorts of questions in the world about Donald  
8 Trump's ties to Russia, Mr. Joffe presented evidence that  
9 there was another tie, that there were these weird look-ups.  
10 And so basically it's just one computer trying to find where  
11 another computer lives on the Internet, and it tries to look  
12 up the address, and there's a record of one computer trying  
13 to find another. That's what DNA data is in my nonexpert  
14 understanding.

15 And all this evidence showed that there were weird  
16 connections between Mr. Trump's business, the Trump  
17 organization, and Alfa-Bank, this Russian bank.

18 And Mr. Joffe came to Mr. Sussman with this  
19 information, and Mr. Sussman agreed to help him out, to help  
20 him figure out how to get this public.

21 Why would he help?

22 Well, one, it's his job. He's a lawyer. You help  
23 clients.

24 Two, he knew and trusted Mr. Joffe. He was  
25 someone he worked with for years, and Mr. Sussman was well

1       aware of Mr. Joffe's credibility and reliability in the eyes  
2       of the federal government.

3               And third, Mr. Sussman had his own experience with  
4       Russian interference in the 2016 election. A few months  
5       before, in the spring of 2016, the Russians hacked the  
6       Democratic party servers, the Democratic National Committee,  
7       the DNC.

8               A lot of initials in this case. Those are some of  
9       them.

10              And you're going to hear when the Russians hacked  
11       DNC servers, the DNC hired Mr. Sussman to be their lawyer,  
12       and he interacted with the FBI on their behalf. And the FBI  
13       knew full well that Mr. Sussman was a lawyer for the  
14       Democratic party itself.

15              So what happened? After Mr. Sussman agreed to  
16       help, Mr. Joffe and cyber experts that he was working with  
17       pulled together the data, analyzed the data.

18              Now, was Mr. Sussman involved in the data  
19       gathering? No. The evidence will show Mr. Sussman wasn't  
20       involved in the analysis of the data. Mr. Sussman didn't  
21       know that there was a spam server.

22              This is what DNS looks like. You'll see during  
23       trial. And it should be on your monitors, if it's not --  
24       it's not.

25              THE COURT: Can everyone see?

1           MR. BOSWORTH: Whether you can see it or not, you  
2 still can't make sense of it. It's a jumbo of numbers and  
3 letters. And what is at issue in this case is thousands of  
4 pages of this kind of gobbledygook. It takes a cyber expert  
5 to understand this. In fact, as you heard, it's so  
6 complicated the government is calling a special expert at  
7 this trial to explain it to you. That's how complicated it  
8 is.

9           Mr. Sussman wasn't involved in any of this.

10          What he was involved in was helping to make this  
11 public. So he went to Mr. Elias -- you heard about that;  
12 Mr. Elias is one of his law firm partners who was the  
13 general counsel for the Clinton Campaign -- and he told him,  
14 hey, I'm working on this story, you know. And you'll hear  
15 about that.

16          And Mr. Sussman knew that the Clinton Campaign  
17 would benefit from this story. The Clinton Campaign was one  
18 of his clients. And because the Clinton Campaign would  
19 benefit from this story, because they were aware, he treated  
20 them as his client, and he billed to them as his client.

21          There's nothing remarkable about lawyers billing  
22 to clients. That's how it works.

23          And by the way, the reason that these bills show  
24 up with Mr. Sussman's entries to the Clinton Campaign is  
25 because Mr. Sussman himself billed those entries. He showed

1 I'm doing work for the Clinton Campaign. Hardly the sort of  
2 thing you would do if you're trying to keep it all a big  
3 secret.

4 So then what happened?

5 You'll hear -- there's not much left on the story  
6 part -- that right around Labor Day Mr. Sussman went to the  
7 *New York Times* to pitch this story. He reached out to Eric  
8 Lichtblau, a Pulitzer-Prize-winning reporter who we expect  
9 you'll hear from in this case, and he arranged to meet with  
10 Mr. Lichtblau. He had meetings with Mr. Lichtblau. He  
11 introduced Mr. Joffe to Mr. Lichtblau. And Mr. Lichtblau, a  
12 serious esteemed reporter, was working on a story and was  
13 about to publish it.

14 And that's when we get to the FBI. At that  
15 moment. Not when he's frustrated the story's not coming  
16 out. When he believes the story is imminent, it's about to  
17 come out.

18 You will see that on September 18th, Sunday,  
19 September 18th, Mr. Sussman received an email with  
20 information suggesting that the Trump campaign was freaking  
21 out about a story about Russia and Trump that was about to  
22 come out in *The New York Times*. The story seemed imminent.

23 And what happens two hours later? That's when the  
24 text goes out. That's when Mr. Sussman realizes he has to  
25 reach out to the FBI to give them a heads up that this story

1 is coming so that they're not caught off guard. And he  
2 tells the FBI, he tells Mr. Baker in the context of that  
3 text, that he wants to help the Bureau, which is exactly  
4 what he did.

5 So the next day Mr. Sussman meets with Mr. Baker  
6 for less than 30 minutes. Mr. Baker didn't take any notes  
7 of the meeting. You'll hear Mr. Baker didn't record the  
8 meeting. Mr. Baker didn't write a report of the meeting,  
9 which is what FBI agents live to do. Nothing. And there's  
10 no one else present in the meeting either.

11 And at that meeting Mr. Sussman told Mr. Baker  
12 this big story's about to come out in a news organization.  
13 I want you to understand it. Here's the information it's  
14 based on. And he didn't ask for anything in return.

15 And that meeting was only the first of multiple  
16 interactions that Mr. Baker and Mr. Sussman had that week.

17 And I want to, before I get into that, just say  
18 one thing. There was talk of the relationship between  
19 Mr. Baker and Mr. Sussman. This clip gives you a good sense  
20 of what that relationship was like. This is a short clip  
21 from an interview of Mr. Baker that Mr. Sussman did in the  
22 months before this meeting in September, and it's at a  
23 conference for privacy professionals where Mr. Sussman  
24 interviewed Mr. Baker.

25 (Video clip being played)

1           MR. BOSWORTH: Privilege?

2           Relationships. Relationships matter, especially  
3           in the small world of national security lawyers.

4           And ask yourselves, after you hear the evidence  
5           and you see Mr. Baker: Do you think Mr. Sussman would throw  
6           his career away, his life away, to tell a lie to that guy?

7           So they have this meeting on September 19th, that  
8           Monday. There are no notes, no recordings, no reports. And  
9           that's one of a series of interactions that occur that week.

10          The text happens Sunday. The meeting happens  
11          Monday. There's a phone call on Wednesday. There's a phone  
12          call on Thursday. Contact, contact, contact.

13          And notably, none of that contact was recorded.  
14          There are no notes of any of that. No reports of any of  
15          that. No witnesses to any of that.

16          You heard that after Mr. Baker met with  
17          Mr. Sussman some other people took notes. They're not going  
18          to be able to explain them. You'll see those notes for  
19          yourselves. But there are no notes for any of these other  
20          phone calls. There are no notes for the other interactions.  
21          More on that in a moment.

22          So the FBI investigation.

23          So after Mr. Sussman meets with them, two things  
24          happen.

25          One, the FBI decides we do want to investigate,

1 and they reach out to *The New York Times*, and they ask them  
2 to hold the story. This story that was supposed to be a  
3 help to the Clinton Campaign, that was going to be good for  
4 the Clinton Campaign, gets shut down. That's the first  
5 thing that happens.

6 The second thing that happens is the FBI  
7 investigates. And you will hear that they did the things  
8 that the FBI can do that private citizens like Rodney Joffe  
9 can't do. They issued subpoenas. They interviewed  
10 witnesses. They got extra data. They did the things  
11 necessary to figure out whether this evidence of potential  
12 communication between the Trump organization and Alfa-Bank  
13 was real or not. And they ultimately found, nope, nothing  
14 to worry about here.

15 Mr. Sussman said there might be smoke. They  
16 looked and said, no fire. Which is what they do with tips  
17 they get day after day after day. That's what the FBI does.

18 That's the story.

19 So now let's go into the questions.

20 The first question: What did Michael Sussmann  
21 actually say? Well, you know about the text message that  
22 Sunday. But what about the meeting on Monday and the phone  
23 calls later that week?

24 Now, you've heard, well, Mr. Baker's going to come  
25 in here, and he will tell you Mr. Sussman said that he was



1 not meeting with me on behalf of a client. But with  
2 respect, Ms. Shaw didn't tell you all that Mr. Baker has  
3 said.

4 What else has Mr. Baker said? What hasn't he  
5 said?

6 You will hear that in 2018 Mr. Baker testified  
7 under oath that he had no memory whatsoever of whether  
8 Sussmann was there on behalf of a client.

9 You'll hear in 2019 he testified under oath that  
10 Sussmann did talk about clients.

11 You'll hear that in 2020 he told the Special  
12 Counsel that the topic of whether there was a client never  
13 came up.

14 Now, they want you to believe Mr. Baker's memory  
15 is clear, but you will see Mr. Baker's memory is clear as  
16 mud. And is that all that surprising? How many of you can  
17 remember a conversation you had at work six years ago that  
18 you didn't take notes of, that you didn't record, and that  
19 no one else was there for? Hard to do. Hard to remember  
20 what you did yesterday, let alone what someone specifically  
21 said to you six years ago. And nothing that the government  
22 introduces into evidence here will show you -- will prove to  
23 you exactly what was said in the conversations that  
24 Mr. Sussman had with Mr. Baker.

25 And here's why that matters. The claim here is

1       that Mr. Sussman told Mr. Baker he wasn't there on behalf of  
2       a client, and the FBI itself said the exact opposite.

3               In a meeting just months later, the FBI -- I think  
4       you can see that -- was asked to brief the senior officials  
5       at the Department of Justice in the Trump administration,  
6       and the FBI at the highest level got together a briefing for  
7       DOJ for the Acting Attorney General handling this matter to  
8       talk through all the different Russia investigations, and  
9       they gave a briefing about this Alfa-Bank investigation.  
10      And where did they say that the allegations came from? They  
11      said -- you can see it crystal clear in black and white --  
12      an attorney brought to FBI on behalf of his client.

13             Mr. Sussman is charged here with saying the exact  
14      opposite. But the FBI said no, he was there on behalf of  
15      his client.

16             Now, this is an important meeting. This wasn't a  
17      casual get-together. This is a briefing of the senior-most  
18      officials of our institution, the FBI, to the Department of  
19      Justice. And what did they say? That when it came to this  
20      case, the allegations were brought by an attorney on behalf  
21      of his client. The exact opposite of what Mr. Sussman is  
22      charged with lying about here.

23             And you know what else you'll learn? You know who  
24      was at that meeting where the FBI at the highest levels said  
25      this came from an attorney on behalf of his client? Jim

1 Baker himself, the man who will say, nope, Sussmann never  
2 said that; of course not; he wasn't there on behalf of a  
3 client.

4 This shows the opposite. It shows that the FBI  
5 thought, as of that point, that the information did come  
6 from an attorney on behalf of his client. So either by then  
7 Baker believed it, too, or Baker didn't care, because none  
8 of it mattered in the first place. That's reasonable doubt  
9 if there ever was.

10 Next, is what Mr. Sussman said false? Well, if  
11 you don't know what he said, you can't know that it's false.  
12 But here, even assuming that the government is able to prove  
13 what they claim Mr. Sussman said -- and you should have  
14 serious reasonable doubt that they can -- is what he said  
15 false?

16 Well, this goes down to why Mr. Sussman was at the  
17 FBI in the first place. And you will see, and the evidence  
18 will show, Mr. Sussman did not go to the FBI to do the  
19 Clinton Campaign's bidding. This meeting was the opposite  
20 of what they wanted. No one told him to go. No one  
21 authorized him to go. No one wanted him to go.

22 And also, use your common sense. If the Clinton  
23 Campaign really wanted to send in an attorney who could  
24 conceal his relationship with them, Mr. Sussman is the last  
25 person they'd send in. He was someone the FBI knew

1 represented partisan clients.

2 The FBI knew that he represented the Clinton  
3 Campaign that summer. The FBI knew he was an attorney for  
4 the DNC, the Democratic party itself. The FBI knew -- on  
5 the very day that Michael Sussmann spoke to Jim Baker on the  
6 phone, the FBI wrote a memo calling him the Clinton  
7 Campaign's lawyer. That's not the kind of person you'd send  
8 in to conceal a relationship with the Clinton Campaign on  
9 the Alfa-Bank stuff.

10 And Mr. Joffe wasn't there to promote --  
11 Mr. Sussman wasn't there to promote Mr. Joffe's interests  
12 either.

13 As the FBI itself will tell you in this trial,  
14 Mr. Joffe had nothing to gain from this meeting; and, if  
15 anything, if Mr. Sussman had told the FBI about Mr. Joffe,  
16 they would have taken all of this more seriously, not less,  
17 given who Mr. Joffe is.

18 Third -- I'm speeding up, because I want to finish  
19 up -- did Mr. Sussman intend to make a false statement?  
20 That's another important hurdle that the government has to  
21 leap over here to convict Mr. Sussman, and they can't.

22 Ask yourselves: What would Michael Sussmann gain  
23 by lying to Mr. Baker? Nothing.

24 What would he lose? Everything. He'd lose his  
25 credibility, his relationship with Baker, his security

1 clearance, his livelihood. For what?

2 And ask yourselves: Are these the actions of  
3 someone who is trying to lie, who is trying to do something  
4 deceitful?

5 If he was trying to hide who was behind the Alfa-  
6 Bank allegations, why would he tell Jim Baker that he,  
7 himself, got the information from cyber experts?

8 If he was trying to dupe the FBI, why give them  
9 the data that they could evaluate for themselves and make  
10 whatever conclusions they wanted about whether it was good  
11 or bad?

12 And if he wasn't motivated by a genuine interest  
13 in national security, why did he go to the CIA -- you heard  
14 about this -- in February of 2017, months after the  
15 election, when there wasn't even a Clinton Campaign in  
16 existence anymore?

17 Because, you will learn, he had a genuine interest  
18 in national security and doing the right thing.

19 And you know what else shows Mr. Sussman's good  
20 intent? What he actually said to the CIA. Unlike the FBI,  
21 which seems not to have taken notes of all these important  
22 conversations, the CIA took a lot of notes.

23 When Mr. Sussman met with that former CIA employee  
24 to set up the meeting, did he say, "No, I'm just here as a  
25 good citizen. I'm trying to just do the right thing here"?

1       No. He said, "I do have a client." You'll see the memo  
2       that that former CIA employee wrote.

3               Client, client, client, client, client, client,  
4       client.

5               This is not the effort of someone trying to hide  
6       the existence of a client. He told them. And then a week  
7       and a half later, when that guy, who knew he had a client,  
8       set up a meeting, Mr. Sussman went in and said, well, look,  
9       I'm not representing the client for the purpose of this  
10      meeting, because he was trying to do the right thing. He  
11      was trying to help the CIA, just like he was trying to help  
12      the FBI, by bringing information -- that is, national  
13      security concerns -- to their attention, and by this point  
14      it was a different set of information all together.

15              And you'll see at that meeting Sussmann said I'm  
16      not representing a particular client, knowing that he had  
17      just told the guy setting up the meeting there was a client.  
18      You can have a client but not go to a meeting for that  
19      client. He said he wasn't expecting anything in return. He  
20      said, "Look, I'm a partisan" -- just FYI, something he  
21      didn't have to say to the FBI because they knew it full  
22      well -- and he said, "If you want to speak to the guy behind  
23      all this, let me know. It's on the table."

24              Not the words or deeds of someone trying to hide  
25      something.

1           The last question: Did this matter? Did what  
2           Mr. Sussman say about his client matter?

3           The government's theory here is that by concealing  
4           his relationship with the Clinton Campaign, that affected  
5           the investigation. They didn't investigate, you know, with  
6           an assumption that there was politics involved. The  
7           evidence shows the exact opposite. They knew from the  
8           beginning, no matter what Mr. Sussman said, that there could  
9           be politics afoot. They knew that he was a lawyer for the  
10          Democratic national party, DNC, the Democratic National  
11          Committee. They knew he was a lawyer for the Clinton  
12          Campaign.

13          And you can see it. You will see it. The notes  
14          from this investigative file, the notes of what the FBI did  
15          after they got the Alfa-Bank allegations are littered with  
16          references to Mr. Sussman as being a DNC lawyer, a political  
17          lawyer, a Democratic lawyer, a lawyer for the Clintons.  
18          These are just a few of the examples.

19          He's essentially a lawyer representing the  
20          Democratic National Committee and Clinton, and they're  
21          saying that his political affiliations were hidden. They  
22          were out and about, loud and clear for everyone to see.

23          And you're also going to see one other thing.  
24          There are going to be witnesses from the FBI who are going  
25          to testify here, and they're going to come and tell you it

1 was so important to know who Mr. Sussman's clients were. It  
2 is so important to know the motivations of the source, like  
3 Mr. Sussman, walking in the door giving information, so  
4 important for us to know that.

5 Judge the FBI by what they did, not by what  
6 they're saying now. If the motivation of a source was so  
7 important, you would think they would have interviewed  
8 Michael Sussmann himself during this investigation.

9 These are just some of the people involved in the  
10 investigation. They're the main players, and most of them  
11 are going to testify here. How many of these people  
12 interviewed Michael Sussmann about his motivations? Zero.  
13 None.

14 If they cared so much about the motivations of the  
15 people supplying the data, well, Mr. Sussman told them he  
16 got this data from cyber experts. How many of these people  
17 investigating this case so thoroughly interviewed the cyber  
18 experts to ask them, "Hey, why are you doing this? Do you  
19 have a motivation that we should know about, some bias we  
20 need to hear about?" Zero. Not one.

21 No one interviewed Mr. Sussman, no one interviewed  
22 the cyber experts, because no one cared about the  
23 motivations of him or his cyber experts, let alone his  
24 clients.

25 And do you know why? You will hear it's because



1        what mattered was the data. They could look at the data and  
2        see is it good, is it bad. And who did they get the data  
3        from? That guy.

4                At the end of the day, it's going to be clear that  
5        no one cared about the motivations of Mr. Sussman or his  
6        cyber experts, let alone his clients. That's what they're  
7        saying now, but judge them by what they did then, not what  
8        they're saying now.

9                Ladies and gentlemen, I'm concluding now, and I  
10       appreciate your patience listening to the opening statement  
11       on behalf of Mr. Sussman and for your patience listening to  
12       the opening on behalf of the government.

13               It is essential that you are here because you are  
14       here to give the government a fair trial, and you're here to  
15       give Mr. Sussman a fair trial. And you can do that by  
16       focusing on the key questions that this case turns on.

17               What did he say?

18               Was it false?

19               Did he intend for it to be false?

20               Did any of this matter?

21               And I'd ask that you keep an open mind as the  
22       trial goes on. You're going to hear from one witness and  
23       believe one thing, and then hear the opposite from a  
24       different witness and maybe believe another. You'll hear  
25       something on direct and something on cross; something in the

1 government's case, something in the defense case.

2 You don't reach a conclusion until all the  
3 evidence is in and the government can come back and talk to  
4 you about what it shows and Mr. Berkowitz can come back to  
5 you and talk to you about what it shows.

6 And I'll leave you with this: As jurors, you have  
7 the extraordinary responsibility to do justice in this case,  
8 and as jurors, you have the extraordinary responsibility to  
9 prevent injustice. This case is an injustice, and I  
10 suspect, when all the evidence is in, you will agree.

11 Thank you.

12 THE COURT: Thank you, Mr. Bosworth.

13 All right. Ladies and gentlemen, we're going to  
14 take our morning break. We will generally break for about  
15 15 or 20 minutes every morning depending on where the  
16 witness testimony is. So why don't we come back ready to go  
17 at 11:00 a.m.

18 Ms. Jenkins, should they leave their notes in  
19 their chair or take them with them?

20 THE COURTROOM DEPUTY: Leave them in the chair.

21 THE COURT: You can leave your notes in the chair,  
22 and we're going to exit out the back door here.

23 (Jury exits courtroom)

24 THE COURT: All right. We'll see you in 15  
25 minutes.

1 (Recess taken)

2 THE COURT: Welcome back, everyone. Please be  
3 seated, and I believe we are ready for the government's  
4 first witness.

5 Ms. Shaw.

6 MS. SHAW: Thank you, Your Honor. The United  
7 States calls Special Agent David Martin.

8 THE COURT: All right. Step right up, sir.  
9 Please have a seat or remain standing and raise your right  
10 hand.

11 (Witness sworn)

12 THE COURT: You can feel free to remove your mask,  
13 if you'd like.

14 THE WITNESS: Thank you.

15 THE COURT: All right. Please proceed.

16 SPECIAL AGENT DAVID MARTIN, Sworn

17 DIRECT EXAMINATION

18 BY MS. SHAW:

19 Q. Good morning, Agent Martin. Could you please introduce  
20 yourself for the jury, and spell your last name for the  
21 court reporter.

22 A. My name is David Martin, M-A-R-T-I-N.

23 Q. And Agent Martin, where is it that you work?

24 A. I'm a Supervisory Special Agent for the Federal Bureau  
25 of Investigation.

1 Q. And what is your title there? What unit are you the  
2 Supervisory Special Agent for?

3 A. I'm the chief of the Cyber Technical Analysis Unit.

4 Q. Okay. And how long have you been with the FBI?

5 A. I've been with the FBI for about 13 years, since July of  
6 2009.

7 Q. Okay. Before we get into your career at the FBI, what's  
8 your educational background?

9 A. Oh, I have a bachelor of science degree in computer  
10 science and psychology with minors in business and math from  
11 the University of Denver. And then I have a master's degree  
12 in information security and engineering with a  
13 specialization in digital forensics and incident response  
14 from the Sands Technology Institute.

15 Q. And before you joined the Bureau, did you work anywhere  
16 else?

17 A. Yes. I had positions as a computer crime specialist for  
18 the Colorado Bureau of Investigation and as a police officer  
19 for the City of Littleton, Colorado.

20 Q. So you mentioned you've been with the Bureau for about  
21 13 or so years. Why don't we walk through some of the  
22 positions that you've had there.

23 How did you start out at the FBI?

24 A. My first assignment is I was assigned to the Detroit  
25 Field Office in the Detroit Cyber Task Force.

1 Q. And what sort of cases would you do at the Cyber Task  
2 Force?

3 A. I primarily worked computer intrusion cases, and then  
4 also intellectual property rights and child exploitation  
5 cases.

6 Q. All right. And would it be fair to say that those  
7 investigations involved examining or looking at what's  
8 called DNS data?

9 A. Yes. The investigations often involved examining and  
10 analyzing network traffic, and DNS data was one of the key  
11 parts of that.

12 Q. And when we say "network traffic," are we referring to  
13 the Internet?

14 A. Computer -- yes, various kinds of computer networks, the  
15 Internet being probably the most largest -- the most largest  
16 and well known of them.

17 Q. So after being a special agent in the cyber division,  
18 did you -- where did you go next within the Bureau?

19 A. So after that I took a job at FBI Cyber Division at  
20 headquarters in the cyber -- in the Technical Operations  
21 Unit.

22 Q. And where is that located? It's not in Detroit, right?

23 A. No. It's in Chantilly, Virginia.

24 Q. Okay. And how did your responsibilities change in that  
25 position?

1       A.   So in that position I managed technical operations,  
2       which basically affected network traffic to help facilitate  
3       our investigations, did things like decoding network  
4       traffic, and helping to respond to computer intrusion  
5       incidents.   So hacking, basically.

6       Q.   So would it be fair to say it was the same array of  
7       cyber investigations that you'd worked on as a special agent  
8       that you were now supervising?

9       A.   Yes.   It was a very -- very similar kind of cases.

10      Q.   And, again, would it be fair to say that it included  
11      analysis and review of DNS data?

12      A.   Yes, frequently.

13      Q.   Okay.   And after that position, did you progress to  
14      another position within the Bureau?

15      A.   So after that I spent four years running our Cyber  
16      Incident Response Team, which is known as CAT [sic].  
17      Basically that team would respond to major computer  
18      intrusions all over the country and the world, and we would  
19      investigate those.

20      Q.   And about how many agents were you supervising within  
21      that unit?

22      A.   So we had about 50 agents scattered throughout the field  
23      that were all part of that unit or as part of that team.

24      Q.   And would they consult with you about issues that arose  
25      within the investigations they were conducting?

1 A. Yes, frequently.

2 Q. And would it be fair to say that those included DNS data  
3 and Internet traffic?

4 A. Without -- basically every investigation involves that  
5 in some way.

6 Q. And then your next position with the Bureau?

7 A. So after that I moved to the Cyber Technical Analysis  
8 Unit where I managed the Advanced Digital Forensics program.

9 Q. And in very general terms for those of us that may not  
10 be specialists, what does the advanced forensics group do?

11 A. So basically it's a group of technical specialists that  
12 analyze very complex computer forensics cases, so examining  
13 hard drives and phones and things like that to see if  
14 they've been hacked. They also do what they call reverse-  
15 engineering of malware; so basically take apart computer  
16 viruses and figure out how they work.

17 Q. And when you say "malware," are you talking about what  
18 most of us would say is a virus?

19 A. Yes, virus or a Trojan or -- they have a lot of  
20 different terms for them.

21 Q. Okay. And then, in your current position, how have your  
22 responsibilities changed?

23 A. So I was then promoted to unit chief of the Cyber  
24 Technical Analysis Unit, so I manage about 70 or so  
25 contractors and government employees who do the same

1 intrusion forensics and malware analysis as well as a group  
2 that does the --

3 THE COURT REPORTER: I'm going to ask you to slow  
4 down.

5 THE WITNESS: Okay, sorry.

6 A. It manages our network traffic analysis and handles our  
7 subscriptions to different data sets, so things like passive  
8 DNS and other data sets out there.

9 Q. All right. Well, we'll get to passive DNS in a little  
10 bit.

11 How many investigations, about, would you say that  
12 you're sort of overseeing at any one time in your current  
13 position?

14 A. We're probably supporting close to a dozen different  
15 investigations in the field at any given time.

16 Q. And approximately how many agents?

17 A. So most of my -- most of my unit is professional  
18 support, so it's mostly computer scientists and contract  
19 technical specialists.

20 Q. And do you review and consult with them on their  
21 findings and developments in their investigations?

22 A. Yes. So I do technical reviews of their reports.

23 Q. So in addition to your work at the Bureau, have you gone  
24 through any professional training related to cyber security  
25 or cyber attacks like you've spoken about?



1 A. Yes. I've taken approximately 20 continuing education  
2 classes on various topics ranging from network traffic  
3 analysis, malware analysis, digital forensics and incident  
4 response, and similar subjects to that.

5 Q. And in addition to those trainings, have you received  
6 any professional certifications?

7 A. Yes. I have about a dozen professional certifications  
8 in the same sort of subject areas, including the GIAC  
9 security expert certification.

10 Q. So you said GIAC. Is that G-I-A-C?

11 A. That's right. It's G-I-A-C. It's the Global  
12 Information Assurance Certification group, I guess.

13 Q. And tell us just generally what that certification  
14 means.

15 A. So it's basically -- it's considered one of the most  
16 difficult-to-obtain certifications in information security.  
17 It basically -- you have to demonstrate knowledge in a  
18 lot -- a wide range of subjects in computer security and  
19 these technical fields.

20 Q. And do you have an idea of how many people receive that  
21 certification?

22 A. I believe there are less than 200 people with that  
23 certification in the world.

24 Q. I'm sorry?

25 A. I believe there are less than 200 people with that

1 certification in the world.

2 Q. In the world. Okay. Thank you.

3 In addition to your certifications, have you  
4 received any awards for your work at the Bureau?

5 A. Yes. I've received a few awards of different  
6 commendations from the Bureau as well as the Attorney  
7 General's Award for Excellence in information technology,  
8 and U.S. Attorneys awards.

9 Q. And in addition to awards, have you published any  
10 articles or given presentations in your area of  
11 specialization?

12 A. Yes. As part of my master's program, I published  
13 several peer-reviewed articles, one of which was on the  
14 topic of network traffic analysis.

15 MS. SHAW: Your Honor, at this time I would ask  
16 for Agent Martin to be certified as an expert.

17 THE COURT: In the area...?

18 MS. SHAW: In the area of cyber security and DNS.

19 THE COURT: Any objection?

20 MR. BOSWORTH: No objection.

21 THE COURT: Okay. The Court will qualify Agent  
22 Martin as an expert to provide testimony in the area of  
23 cyber security and DNS data analysis.

24 Ladies and gentlemen, there are generally two  
25 types of witnesses that you might hear from. There are lay

1 witnesses who have some involvement in the facts of this  
2 particular case, but there is also a category of witnesses  
3 called expert witnesses who the attorneys sometimes call to  
4 help the jury understand scientific or technical areas based  
5 on their professional or academic expertise. And Agent  
6 Martin has been qualified as an expert for this trial, okay?

7 MS. SHAW: Thank you, Your Honor.

8 BY MS. SHAW:

9 Q. So Agent Martin, in preparation for your testimony  
10 today, did you prepare a slide show or tutorial that you  
11 might want to show the jury?

12 A. Yes. I prepared a set of slides to illustrate some of  
13 the -- some of the concepts of DNS and the network called  
14 The Onion Router or TOR.

15 Q. And if I could show you Government's Exhibit 1700, do  
16 you recognize what Government's Exhibit 1700 is?

17 A. That's my PowerPoint presentation.

18 MS. SHAW: Your Honor, I'd move to admit  
19 Government's 1700.

20 THE COURT: Any objection?

21 MR. BOSWORTH: No objection.

22 THE COURT: So moved.

23 MS. SHAW: Okay. If we could move to the second  
24 page.

25 Third page, I guess. Let's stop here.

1 BY MS. SHAW:

2 Q. So let's start with DNS or Domain Name System. What is  
3 that?

4 A. So DNS is basically a way to map human readable names of  
5 things like Google.com or Yahoo.com to numerical IP  
6 addresses. And it works kind of the same way -- it's a bit  
7 more complex, but it works kind of similarly to a phone book  
8 where it maps a person's name to a numerical telephone  
9 number.

10 Q. And before we get into the right side of the  
11 demonstrative, how did this DNS or Domain Name System come  
12 about? What was the origin of this?

13 A. So the origin is that the Internet was first developed  
14 essentially in research -- like in a research setting, at  
15 universities and research labs where it was used on a fairly  
16 small scale, and people could just use numerical IP  
17 addresses to communicate. So they would remember that  
18 1.2.3.4 was one server and 1.2.3.5 was another server.

19 Obviously, as there got to be a lot more of these  
20 and people started using them more widely, it got really  
21 hard to remember all those different numbers. And so  
22 instead of having to try and memorize hundreds or thousands  
23 of numbers, they came up with a way of mapping names to  
24 numbers; and that was where DNS came from.

25 Q. So on the slide on the right, you have a comparison of

1 phone book and DNS. Maybe you could describe for the jury  
2 what that's about?

3 A. Yes. So the phone book you have -- you have a set of  
4 names on the left-hand side of different people. You have a  
5 set of numbers on the right-hand side. And for most people,  
6 myself included, names are easier to remember than numbers.  
7 So you can look in the phone book. If you know you're  
8 trying to talk to Mr. Smith, you can go down and find his  
9 number [sic] and look over and find his phone number.

10 Q. And with respect to DNS, I see there's a different  
11 format, but it's the same concept?

12 A. Yes. It's very similar. Basically you have a numerical  
13 IP address, which is what your computers use to talk to one  
14 another. So your computer will use an IP address to talk to  
15 a web server when you're going to a website or using your  
16 email or something like that.

17 And trying to memorize a lot of these numbers is  
18 very difficult. I mean, there's very few IP addresses that  
19 even I memorize. It's a lot easier to remember I want to go  
20 to Google.com or Yahoo.com or YouTube or something like  
21 that.

22 MS. SHAW: If we could have the next slide,  
23 please.

24 Q. Okay. If you could walk us through how a DNS request  
25 or -- actually, let me back up.

1           Is a DNS request the same as what we might call a  
2   look-up?

3   A.   Yes.   They're synonymous.

4   Q.   All right.   If you can start walking us through what  
5   we're seeing here.

6   A.   My apologies.   You can actually ignore the thing that  
7   says "http" right there.   That was a glitch in my slides.  
8   That doesn't come into play until the very end.

9           What we have here is we have our user on the left-  
10   hand side.   And let's say, for argument's sake, this is my  
11   great aunt who has never used Google before.   On the right-  
12   hand side you have a picture of the world with a bunch of  
13   lines around it.   This is basically -- this represents the  
14   Internet.   So this is a bunch of different wires and  
15   fiber optic cables and satellites and all of the other things  
16   that use the Internet to communicate around the world.

17           And our user over here on the left-hand side, my  
18   great aunt, has her laptop, and though she doesn't know  
19   this, her computer has an IP address, and that's that  
20   108.18.158.20, and we're going to say for argument's sake  
21   this is a -- or, sorry, it's a Verizon FiOS.   So it's a --

22           THE COURT:   Agent Martin, you need to slow down  
23   just a little bit for the court reporter, particularly when  
24   you're clicking through numbers.

25           Go ahead.

1       A.   So she has a Verizon FiOS IP at her house.  She's  
2       plugged into her home Internet connection.  And she's  
3       decided she'd like to visit Google.com.

4       Q.   Next slide, please.

5       A.   So she goes through her browser, and she types in  
6       Google.com.  And everything that happens from this point on  
7       is pretty much transparent to her.  She has no idea her  
8       computer is doing this, but her computer is.

9                So the first thing the computer is going to do  
10       is -- again, she's never used Google.com before, so it's  
11       going to look it up in its own sort of internal address  
12       book.  And it's going to say, "Do I already know the IP  
13       address for Google.com?"

14               So next.

15       Q.   Next slide, please.

16       A.   And so this is what they call local DNS, and that's just  
17       basically a directory of IP addresses and domains that the  
18       computer already knows about.  And so in this case she  
19       doesn't -- her computer doesn't know the address for Google,  
20       so it's going to ask its -- what they call the default DNS  
21       server.

22       Q.   Next slide, please.

23       A.   And this -- in this case, it's basically a DNS server  
24       from Verizon, so it's for -- Internet service provider has  
25       this DNS server.  And she's going to ask that server what

1 the IP address is for Google.com.

2 Q. And let me just stop you there. And, again, she's typed  
3 in "Google," but this is a sort of a numeric inquiry from  
4 your aunt to the Verizon DNS server?

5 A. Yes. This is all being transmitted without her being  
6 able to -- I mean, as a user, you don't see any of this  
7 happening behind the scenes.

8 Q. Sorry. Go ahead.

9 A. So let's say in this example that the FiOS DNS server  
10 doesn't know Google.com's IP.

11 Q. Next slide.

12 A. So it's going to check with what they call the root DNS  
13 servers. And the root DNS servers are -- they're basically  
14 a group of 13 logical servers out there, that their IP  
15 addresses never really change, and all the other DNS servers  
16 in the world know that's the first place to stop when you're  
17 trying to look up a new item -- a new address.

18 Q. Could you just give us an example of some of these root  
19 servers. Are they, you know, some for com and some for biz,  
20 like different suffixes?

21 A. So these are actually a level above that. So these know  
22 the address to the .com server and -- the server for .com,  
23 and there's a server for .net, and there's a server for .us  
24 and things like that. So those are the only addresses that  
25 this server knows.



1 Q. Okay. And so this root server is asking for the IP?

2 A. Yeah. So the FiOS DNS server, what's called a recursive  
3 resolver, makes a request and asks the root DNS server what  
4 the IP address is for Google.com, and it says that it's  
5 asking on behalf of my great aunt.

6 Q. All right. Next slide, please.

7 A. So the root DNS server doesn't store this kind of  
8 information. So it says to go ask what they call the TLD or  
9 the Top Level Domain server for .com, because it ends in  
10 .com. So it's going to say, all right, go to C. -- this  
11 string of servers -- and that's the .com name server.

12 Q. And, again, this is all behind the scenes when you type  
13 it in?

14 A. Yes, this is all behind the scenes.

15 Q. Next slide, please.

16 A. So then it goes to the -- they're going to go to the  
17 .com server, and the .com server, they're going to ask it  
18 the same question: What's the IP address for Google.com?

19 Q. Okay.

20 A. Next.

21 And then -- so the .com server doesn't know the IP  
22 address for Google.com, but it does know who can give a  
23 definitive or an authoritative answer to that, so it knows  
24 what server knows Google.com's IP address for sure, and  
25 that's -- in this case it's NS1.Google.com.

1 Q. And just so we're clear, this is sort of an exaggerated  
2 series of look-ups for purposes of illustrating all the  
3 possible steps. Would it be fair to say that many of these  
4 steps might be -- in our heavily Internet-intensive world,  
5 we don't have to even get this far?

6 A. Yes. It's -- I mean, in most cases you're going to --  
7 if you look up Google.com, it's going to look on your local  
8 PC, and you've probably resolved that at some point in the  
9 past, so it's already going to know the IP address. And if  
10 not, almost certainly your Internet service provider will  
11 know the IP address.

12 So it may not have to work its way all the way  
13 through this chain, but it can, if it has to.

14 Q. And before I move on, again, if you can, TLD, that  
15 stands for Top Level Domain?

16 A. Yes, and so that's basically the last thing in the  
17 domain. So the .com or the .net or the .biz, or whatever  
18 the last portion of an IP -- or the DNS or domain name is.

19 Q. Next slide, please.

20 A. So finally it's going to reach the authoritative Google  
21 DNS server. And this is -- this is a server that's run by  
22 Google itself, and it knows for sure what the IP address for  
23 www.Google.com is, and so it's going to provide that answer  
24 back to the user.

25 Q. Next slide, please.

1       A. So it can say I can authoritatively say that this is the  
2       IP address for it. So then it's going to return that back  
3       across -- across the wire.

4       Q. Next slide.

5       A. And so now the web browser knows that Google.com equals  
6       this IP address.

7               So at this point the DNS look-up and request is  
8       complete. Your computer now knows what the address for  
9       Google.com is. But it hasn't taken any other steps yet. It  
10      hasn't actually connected to Google.com.

11             So the DNS query is done. The DNS query doesn't  
12      connect to the www.Google.com IP address. It returns that  
13      answer to the web browser, and then the web browser reaches  
14      out and makes another connection.

15      Q. Next slide.

16      A. So then the web browser, now knowing what the right IP  
17      address is to connect to Google, it makes what they call an  
18      http or what's commonly known as a web request for the web  
19      server for Google.com, and you see the following web page.

20             Next.

21             And there is the old familiar Google web page.

22             So basically in the time that it's taken to enter  
23      Google.com and hit the enter key, within probably less than  
24      a second, all of this has happened on the backside,  
25      completely invisible to the user. And then you've made a

1 connection to Google, and you have the web page that you're  
2 looking at.

3 Q. And would this -- going back to your phone analogy,  
4 would it be similar to when we dial into our phone? We  
5 don't see all of the cell towers connecting, but eventually  
6 we get through to the pizza place or wherever it is we're  
7 trying to reach?

8 A. Yes. That's a similar kind of thing. There's a lot of  
9 things that happen behind the scenes to make it happen, but  
10 to the user it's kind of abstracted away so you don't see  
11 it.

12 Q. Next slide, please.

13 All right. This slide's entitled "Passive DNS."  
14 As simply as you can, explain for all of us, what is passive  
15 DNS?

16 A. So passive DNS is basically capturing a copy of DNS  
17 queries that are happening on the Internet at a certain  
18 place or series of places.

19 Q. And when you say "queries," would that be a look-up?

20 A. Yes, so look-up or a query.

21 Q. All right. So what are we looking at in this slide? I  
22 see we have -- is this your aunt again?

23 A. This is my great aunt again.

24 So she's over here making -- making different  
25 look-ups. We have the same DNS server for her Internet

1 service provider there, and then we have a couple different  
2 DNS servers for illustrations. I picked Yahoo, Google, and  
3 Facebook.

4 Q. All right. And I see that you have something that --  
5 two things that are labeled "Passive DNS Sensor." What can  
6 you tell us about passive DNS sensors?

7 A. So passive DNS sensors are set up at different --  
8 usually at a place that -- usually at companies that provide  
9 DNS services, and they are run by commercial services that  
10 make -- that basically make an agreement with the different  
11 DNS providers to make a copy of any DNS requests that come  
12 across, and then the answers to those questions, and then  
13 report that back to their -- back to their company.

14 Q. And you said that these were commercial. Who might be  
15 some of the clients of these commercial passive DNS  
16 collectors?

17 A. A lot of them are used on information security, so  
18 people who are doing network defense, trying to block  
19 spammers, trying to identify hackers or compromise  
20 computers.

21 Q. And could you -- do you know a few names of some of the  
22 companies that might collect this passive DNS?

23 A. Yes, so some of them would be companies like Farsight,  
24 Packet Forensics, or Neustar.

25 Q. Okay. So why don't you pull up the next slide, please.

1           All right. So if you could walk us through what's  
2           happening here?

3           A. So here we've made a -- it's going to be a simplified  
4           DNS look-up, so the same sort of process in the last slide  
5           happened. The request went through to the Google DNS  
6           server, and you got the answer back, found out the IP  
7           address for Google.com, and there were no passive DNS  
8           sensors at the server, the DNS server that returned that  
9           answer. And so there's -- there's nothing recorded in the  
10          passive DNS log.

11          Q. And when you say "passive DNS log," you're indicating  
12          the section -- the heading on the left of the demonstrative?

13          A. That's correct. It will get populated here shortly.

14          Q. And tell us a little bit more about this straight route  
15          to the Google sensor. Is that unusual?

16          A. No. It's -- obviously there are a lot of different DNS  
17          servers in the world, and none of the passive DNS companies  
18          have sensors at all of them. I don't know how many  
19          thousands or millions of DNS sensor -- or DNS servers there  
20          may be in the world, but there are -- the passive DNS data  
21          is not being collected at all of them.

22          Q. So would it be fair to say that those are kind of gaps  
23          within the collection of passive DNS?

24          A. Yes. So passive DNS kind of works on the principle that  
25          there is a -- that they're taking a sampling of the total

1 Internet traffic in the world and trying to draw conclusions  
2 based on that.

3 Q. Okay. The next slide, please.

4 A. One more click. There we go.

5 All right. So we have another connection. So  
6 this time there's a DNS query for Yahoo, and in this case it  
7 does go through one of these passive DNS sensors. And when  
8 the query is made, the DNS sensor makes a copy of that --  
9 makes a copy of that query and it puts it into this format  
10 here. And this particular format is called JSON, and  
11 it's -- it's a format that can store a lot of information,  
12 and it's very easy for a lot of computer programs to read.  
13 It's somewhat less easy for humans to read.

14 Q. And when you're referring to the format, you're  
15 referring to the data that's right underneath "Passive DNS  
16 Logs" on the visual?

17 A. So yes, so it's the data that begins with "Date," and it  
18 has a lot of brackets and colons.

19 Q. And that is recording the fact that your great aunt  
20 looked up the IP for Yahoo and it went through the Yahoo  
21 server?

22 A. Yes. So it records several different pieces of  
23 information. So it says what time the query was made, who  
24 made the query, who answered the query, so which DNS server  
25 answered the query, and then what the answer to that query

1 was, among a few other different pieces of information.

2 Q. Next slide.

3 A. So then we have another similar kind of look-up. They  
4 look up the IP address for Facebook. There's a passive DNS  
5 sensor in this path, too, and so it makes another entry here  
6 in the logs, and it shows the same information: who looked  
7 it up, where did they look it up, what was the answer, and  
8 when was the query made.

9 Q. So in looking at these logs, is there another format  
10 that might be a little more user friendly --

11 A. Yes, oftentimes these are converted into a format that's  
12 called a comma-separated or tab- or type-separated value  
13 format. And it's basically designed to be turned into a  
14 spreadsheet so it's a little bit easier to read either just  
15 looking at it as a text file or putting it into something  
16 like Excel.

17 Q. Ready for the next slide?

18 A. And so this here is an example of one of these kind of  
19 formats. So they've taken a subset of the fields.

20 So in this case the fields that are listed are the  
21 time that the query was made, and then there's this little  
22 separator character here that tends to be referred to as a  
23 pipe. There's what domain was queried for. And then the  
24 third field is who made the query, who looked it up.

25 Q. Now, you indicated that the different fields refer to



1 different things, but this looks like a lot less information  
2 than we had on the last screen. How does that translate to  
3 this? Do you pick and choose which data fields you want to  
4 put into this log?

5 A. Yes. So depending on how you export the data from sort  
6 of the raw format that it started with, you can pick to  
7 export every field, or you can decide that you're only  
8 interested in a certain subset of those fields here. And in  
9 this case there was a certain subset of fields chosen.

10 Q. And just looking at this, for example, if you sent  
11 this --

12 THE COURT REPORTER: Can you speak into the  
13 microphone, please.

14 MS. SHAW: Oh, sure. Sorry. Sorry. I'm  
15 challenged between my eyesight and the microphone.

16 Q. So in terms of the categories that were selected here,  
17 would I automatically know that that's the date, and that's  
18 the IP, or would I have said -- have to write back and say,  
19 "Agent Martin, what are the column headers, or what's the  
20 key for this?"

21 A. Yes, because, I mean, it's hard to tell from this  
22 whether -- which -- I mean, the time field is pretty easy to  
23 figure out, that that's probably a time there saying the 6th  
24 of May of this year at 8:14 in the morning.

25 The domain name field, it might be kind of hard to

1     see what that actually represents. And with the IP address,  
2     you can wonder whether is that the user's IP? Is that the  
3     DNS server's IP? Is that Yahoo's IP?

4             So generally, when you -- when you export data to  
5     this format, you put what they call a header at the top. So  
6     these are like your -- when you have it in Excel Workbook,  
7     you'll have the column header at the top of each one to say  
8     what each one of these fields means.

9     Q. Okay. Is there another slide on DNS before we move on  
10    to --

11    A. I think that's it.

12    Q. Before we move on to the next topic, I just wanted to  
13    ask you a few questions about what we just reviewed in the  
14    slides with respect to DNS.

15             What does a DNS look-up tell us in most basic  
16    terms?

17    A. A DNS look-up tells you that one computer looked up the  
18    IP address for a particular domain name.

19    Q. And I realized I didn't ask you. The IP address, does  
20    that stand for "Internet protocol"?

21    A. That's correct.

22    Q. Now, does the existence of a DNS look-up, such as what  
23    we might see in these logs, mean that there was an actual  
24    connection between the computer, your great aunt's computer,  
25    and Facebook?

1     A.  No, it doesn't -- there are two separate processes.  You  
2     can conduct a DNS look-up as -- basically as a way to -- as  
3     the first step of another connection, or you can look up --  
4     do a DNS look-up entirely on its own.

5     Q.  And similarly, would a DNS look-up be able to tell you  
6     whether there were, in fact, communications such as emails  
7     between the two IP addresses?

8     A.  No, a DNS look-up on its own cannot tell you that.

9     Q.  Okay.  And similarly, does it -- would an IP look-up be  
10    able to tell you any substance that was passed between that  
11    IP address and the look-up -- the one that was looked up?

12    A.  No.  You would have to have a different source of data.  
13    So you would have to -- you would have to have another  
14    source of data to establish whether there was an actual  
15    connection or what occurred during that connection.

16    Q.  So other than the look-up that was illustrated in these  
17    slides, is there anything else that can trigger an IP look-  
18    up?

19    A.  There actually -- there's multiple different things it  
20    can do at a time.  A lot of -- there are some utilities that  
21    are just designed to look up IP addresses.  There's a  
22    command in Linux that's called DIG, D-I-G, just kind of like  
23    digging a hole, and it's designed to -- it takes an IP -- or  
24    it takes a domain name and it brings back the IP address for  
25    it.  And it's just used for -- system administrators and

1 people like that use it to look up domain names.

2 You also have a lot of security appliances, things  
3 like spam filters or firewalls or things that are supposed  
4 to -- that are trying to block cyber attacks on networks  
5 that will look up IP -- or look up domain names to try and  
6 find out where they are or if they match; like in the case  
7 of email, whether the domain matches with the IP.

8 So if you're getting a phishing email that says  
9 this is coming from Amazon, your account has been suspended,  
10 but if they look up the domain name that it's coming from  
11 and it's not really Amazon, then the spam filter may choose  
12 to block it that way.

13 Q. Okay. And one more vocab term. What does "visibility"  
14 mean when we talk about DNS?

15 A. So it's -- particularly with passive DNS, it just means  
16 what -- which servers -- which DNS servers a particular  
17 passive DNS server can see.

18 So let's say, just for a completely contrived  
19 example, if there are a thousand DNS servers on the  
20 Internet, and there are passive DNS sensors for a particular  
21 company on ten of them, then they'd have 10 percent  
22 visibility over the total Internet.

23 Q. And how does visibility affect an analyst's  
24 understanding of DNS data?

25 A. So it basically -- like analysts have to take into

1       consideration that any -- any passive DNS data that they're  
2       seeing represents a portion of all the DNS look-ups on the  
3       Internet. But there are obviously DNS queries that are  
4       happening that are not being picked up by that passive DNS  
5       source.

6               So if you see something in the passive DNS  
7       records, you know that that query had been made; however,  
8       you can't prove that a query was not made by it not being in  
9       the DNS record or the passive DNS records.

10      Q. So would it be fair to say that the collection source  
11      and its visibility would be something that would be  
12      important for the analyst to know in addressing this kind of  
13      data?

14      A. It's something that's good to know, although it's very  
15      hard to -- like you can't tell how -- I mean, no one knows  
16      exactly how many total DNS servers are on the Internet, so  
17      it's hard to say what percentage of visibility you actually  
18      do have for many of these commercial passive DNS services.

19      Q. Okay. All right. Can I have the next slide, please.

20               Okay. TOR, can you tell us what TOR is.

21      A. So "TOR" is an acronym for The Onion Router, and it's  
22      a -- it's basically a network that's designed to help people  
23      stay anonymous on the Internet.

24      Q. And if you could, explain how it helps people stay  
25      anonymous on the Internet.

1 A. All right. So it's operated by a group call The TOR  
2 Project. It's a nonprofit Internet privacy organization,  
3 and it's basically run -- they run a network of computers  
4 that are operated by different volunteers who agree to  
5 participate in the network. And at the most basic level  
6 it -- every time you connect to a website or a resource on  
7 the Internet, it routes that connection through a random  
8 path.

9 So instead of going directly from your Internet  
10 service provider to the website you're visiting, it's going  
11 to route through a random series of other servers on the  
12 Internet, oftentimes even in different countries. So you  
13 may start here in Northern Virginia, end up in a server in  
14 the U.K., back down to South America, and then come out in  
15 Egypt before coming back to Google.

16 Q. Before going on to the demonstration of how that works,  
17 you indicate that there's a published list of TOR exit  
18 nodes. Tell us about that.

19 A. Yes, so The TOR Project keeps a list of all the  
20 different IPs that were used as TOR exit nodes over time,  
21 and they have this data published on the Internet, and it's  
22 available back to February of 2010.

23 Q. So if I were to have an IP address, I could go to The  
24 TOR Project and look up whether it's on there and as a TOR  
25 exit node?

1 A. That's correct.

2 Q. All right. Next slide, please.

3 Help us understand TOR a little bit better. What  
4 are we seeing here?

5 A. All right. So this is a -- this is a graphic -- a  
6 pretty good infographic that we got from the Electronic  
7 Frontier Foundation, which is another nonprofit that's  
8 committed to Internet privacy, and it shows basically how  
9 to -- how the TOR connection works.

10 So the first step is that we have Alice here, and  
11 she'd like to browse through a particular website, and she'd  
12 like to do it anonymously, for whatever reason. And so the  
13 first thing she does is she goes to a server run by Dave  
14 here and has -- the server's part of the TOR network -- and  
15 gets a list of all the TOR nodes from that server, and it's  
16 called a directory server.

17 Q. Next slide.

18 A. So sort of the next step is that Alice's TOR client on  
19 her computer -- it's usually part of a web browser. So they  
20 have a thing called the TOR browser. It kind of automates a  
21 lot of this process. And so she -- the TOR software picks a  
22 random path out of all the different TOR nodes that it knows  
23 of, it picks three random nodes and then sends the traffic  
24 through it in such a way that each node only knows the next  
25 node.

1           So the first -- the first computer here knows  
2       Alice's IP, and it knows the second node's IP.

3           The second node knows the first and the third, but  
4       not Alice or Bob.

5           And then the third knows the middle node and Bob,  
6       but not any of the other ones.

7       Q. And if you were to search on TOR like Alice is doing,  
8       was it going to go through the same path every time?

9       A. No, it's not going to.

10      Q. Next slide, please.

11      A. So here is a connection. So now Alice is going to --  
12      she's done looking at Bob's website. She's now going to be  
13      going to Jane's website, and so in this case she picks a new  
14      path for this new connection. It picks three different  
15      nodes in a different order, and then it makes the connection  
16      to Jane's website, and Alice is able to browse that.

17      Q. And would Alice know the path that it took?

18      A. I believe Alice could -- her software would know the  
19      path that it took, but, like, anybody on the other side  
20      wouldn't know the path.

21      Q. Is there a next slide?

22      A. I believe that's the end of it.

23      Q. Okay. So let's go back to the --

24           MS. SHAW: Keep the TOR up.

25      Q. So what's the purpose -- we talked about the encryption



1       that happens between these. What's the purpose behind this  
2       TOR routing system?

3       A. It's basically just to make sure it's -- it's to make it  
4       difficult to determine who is actually visiting a particular  
5       site.

6               There's a number of reasons that people will do  
7       this. Sometimes it's because they're in a country that  
8       restricts freedom of speech, and they want to get around  
9       government censorship in one of those kind of countries. It  
10      can also be used just because people want to browse  
11      anonymously because they're concerned with privacy. And  
12      it's also used by a lot of malicious actors to do things  
13      like connecting to -- like hacking computers and doing  
14      things like that. So it can be used for a whole variety of  
15      reasons.

16      Q. So you mentioned that it takes a random path and that  
17      the exit node will be different, potentially, each time you  
18      use TOR. Would you ever have it set up so that the exit  
19      node was at the same place every time?

20      A. No. I don't know if it's even possible to configure --  
21      it might be possible to force TOR to do this somehow by  
22      messing with the software, but that would actually  
23      decrease your security to do that, because you would then be  
24      coming -- you'd basically be turning TOR into just a simple  
25      proxy.

1           Where -- a proxy server is where you send your  
2       traffic to a server, and then it comes out from another  
3       predictable place every time. So things like -- people will  
4       use them sometimes if they want to -- these simple proxies  
5       will use them to stream Netflix from a different country or  
6       something like that. But you wouldn't want to do that sort  
7       of thing through TOR because it's significantly slower than  
8       a regular connection because you -- for privacy, it has to  
9       jump through three different servers before it gets to where  
10      it's going.

11     Q. And then you mentioned privacy. So, for example, the  
12     bottom computer there next to Bob, if I were to set that up  
13     and say that that was going to be my TOR exit node -- let's  
14     just assume that I could -- how would that affect my ability  
15     to stay private with what I was doing on the Internet using  
16     TOR?

17     A. It would make you a lot easier to spot because if  
18     you're -- you're consistently connecting to a place, and  
19     you're trying to -- you consistently connect to a server  
20     without revealing who you are. If you're constantly coming  
21     out of the same TOR exit node, it's a lot easier to figure  
22     out it's the same person coming back over and over again, as  
23     opposed to if you're using TOR the way it's supposed to work  
24     and that it does work and coming out of random exit nodes  
25     every time, it's very hard to tell whether -- whether any

1 two TOR connections are in any way related.

2 MS. SHAW: Thank you, Agent Martin.

3 THE WITNESS: Thank you.

4 CROSS EXAMINATION

5 BY MR. BOSWORTH:

6 Q. Good morning, Special Agent Martin.

7 A. Good morning.

8 Q. We've never met before, correct?

9 A. I don't believe so.

10 Q. Okay. So this is pretty complicated stuff, this DNS  
11 business? I'm envious.

12 A. It can be, yes. There are a lot of nuances behind it.

13 Q. And you're an expert in this, right?

14 A. I use it -- I use it and analyze DNS traffic quite  
15 frequently.

16 Q. And you became an expert because of your education and  
17 experience leading to today, correct?

18 A. That's correct.

19 Q. All right. So you studied computer science in college?

20 A. That's correct.

21 Q. You got a master's degree?

22 A. Yes.

23 Q. You got training for what seems like hundreds of hours?

24 A. Yes, quite a few.

25 Q. And you got all these certifications in various cyber

1 security and DNS subject matters?

2 A. Yes, in multiple cyber security matters.

3 Q. And so all that education and training is what enables  
4 you today to understand this and explain this to the jury  
5 and to walk us through how DNS works, right?

6 A. That's correct.

7 Q. Now, you testified on direct examination about what a  
8 DNS look-up is. Is it fair to say that at the most  
9 elemental level it's just one computer trying to find out  
10 where another server is on the Internet?

11 A. Yes; at a very basic level, yes.

12 Q. That's the only level I can do it.

13 It doesn't, for example, show that one computer  
14 is, in fact, sending an email to another computer?

15 A. That's correct. They're -- like in order to send an  
16 email, it will do a DNS look-up, but the fact that there was  
17 a DNS look-up doesn't mean that an email was sent.

18 Q. And similarly, just because there was a look-up doesn't  
19 mean that one particular computer connected to the website  
20 of another computer, right?

21 A. That's correct.

22 Q. And it doesn't show the content of any emails that might  
23 have been exchanged between one computer and another  
24 computer?

25 A. That's correct. It simply shows the domain name was

1 looked up.

2 Q. And that's a basic fact about DNS data. It shows a  
3 potential connection, but it doesn't show the actual  
4 connection or what's going on in the interaction between one  
5 computer and another?

6 A. Yes. I mean, so in the most strictly technical sense, a  
7 DNS look-up is a connection in and of itself, but any  
8 connection to the IP that was returned by the DNS look-up is  
9 not in the DNS data so...

10 Q. Got it.

11 A. In that regard, the look-up is totally separate from any  
12 kind of substantive communication after the fact.

13 Q. Got it.

14 So it is a basic fact that the look-up is  
15 different from the substantive communication?

16 A. That's correct.

17 Q. And any cyber expert would know that fact, right?

18 A. That's correct.

19 Q. And the FBI's cyber experts would know that fact?

20 A. Yes, I believe so.

21 Q. And to actually figure out if one computer is connecting  
22 to the other computer, an investigator would need to do  
23 more, right, would need more information? Is that fair to  
24 say?

25 A. Yes. There would have to be an additional investigation

1 to determine that.

2 Q. So, for example, you could get a search warrant to  
3 figure out what's going on at a server, correct?

4 A. Potentially. There are multiple different techniques  
5 you could use depending on the context.

6 Q. Okay. And you could use subpoenas to try to get  
7 information, right?

8 A. Yes. Subpoenas can be used to get information from  
9 different service providers.

10 Q. Okay. And you could interview people at a service  
11 provider who are at a server, correct?

12 A. Potentially you could, depending on what level of  
13 knowledge and access they had.

14 Q. Okay. And those are things that the FBI can do, right?

15 A. Yes.

16 Q. Those are things that a private citizen like me couldn't  
17 do, right?

18 A. There are -- I mean, people -- yes, you can't -- a  
19 private citizen can't get a search warrant or a subpoena or  
20 any of those sorts of legal processes.

21 Q. I can't force a server to give me information about  
22 what's going on with someone's communications, correct?

23 A. No, not without a court issuing an order. I mean, as an  
24 attorney relevant to a case, I'm sure that you could get a  
25 subpoena or get a court order for information.

1 Q. And those steps that we just discussed are steps that  
2 only law enforcement officers can take, getting a search  
3 warrant, getting a subpoena? Yes or no.

4 A. They are -- I mean, there are other ways of getting a  
5 subpoena. For example, in a civil -- in a civil case,  
6 different litigants can -- and their attorneys can get court  
7 orders and subpoenas for information relevant to the case.  
8 But in general, in a criminal investigation, law enforcement  
9 would go to the U.S. Attorney's Office or to the prosecuting  
10 authority to get the Court to issue that process.

11 Q. Okay. Let me just do it again so we get a clear yes or  
12 no, if you can.

13 So law enforcement officers can issue search  
14 warrants to figure out if one computer is, in fact,  
15 communicating with another, correct?

16 A. Law enforcement officers can request search warrants and  
17 serve them, yes.

18 Q. Okay.

19 A. But the judge issues the search warrant.

20 Q. They can request a search warrant. They can't get a  
21 search warrant.

22 A. Correct. They can request a search warrant from a judge  
23 and then serve that search warrant to get the information.

24 Q. You testified on direct examination about visibility  
25 into the source of DNS data. Do you remember that

1 testimony?

2 A. Yes.

3 Q. Okay. Just to be clear, the FBI doesn't have access to  
4 all the DNS data in the world, correct?

5 A. Certainly not.

6 Q. And the FBI gets access to data sometimes by purchasing  
7 DNS data; is that correct?

8 A. That's correct.

9 Q. And fair to say the more the government pays for DNS  
10 data, the more valuable it is to the government?

11 A. Not necessarily. There -- having multiple sort of  
12 passive DNS sources is useful because there's a different --  
13 each set of data has a different sort of area of visibility.  
14 So having a couple or a few different passive DNS providers  
15 can be valuable, but I don't know that it's necessarily --  
16 how that value scales with price.

17 Q. But you get what you pay for, right?

18 A. It is a paid service. You don't get it for free.

19 Q. Okay. Do you know a man by the name of Rodney Joffe?

20 A. I've met him before.

21 Q. You met him before?

22 A. Yes.

23 Q. So I take it you know him?

24 A. I wouldn't say I know him. I've met him on -- related  
25 to a case.



1 Q. And he's someone who is a DNS expert, too, right?

2 A. That's my understanding.

3 Q. He's someone who is highly respected and trusted in the  
4 cyber security community, correct?

5 A. He's well known in the cyber security community.

6 Q. Are you aware that he and his companies maintain  
7 contracts with the U.S. government resulting in payments of  
8 tens of millions of dollars for services including DNS data?

9 A. Not specifically. I know that there are some contracts,  
10 but I don't know the specifics of the contracts with  
11 Neustar.

12 Q. Were you aware that Rodney Joffe had patents in DNS  
13 data?

14 A. I believe I had heard that before.

15 Q. And he founded companies that specialize in DNS data?

16 A. Yes.

17 Q. And he was someone that the FBI in the 2016 time period  
18 respected. Fair to say?

19 A. As far as I know.

20 Q. And he's someone that the FBI relied on, correct?

21 A. I would say that the -- I don't know --

22 THE COURT: I'm sorry, sir. What was your last  
23 answer?

24 THE WITNESS: What's that?

25 THE COURT: What was your last answer?

1 THE WITNESS: Martin.

2 THE COURT: Your last answer.

3 THE WITNESS: Oh, sorry.

4 THE COURT: As far as I know?

5 THE WITNESS: As far as I -- sorry, the last  
6 question was...?

7 MR. BOSWORTH: I can rephrase it.

8 THE COURT: Repeat the last question.

9 MR. BOSWORTH: Yes, sir. Let me withdraw it and  
10 rephrase it.

11 BY MR. BOSWORTH:

12 Q. Are you aware that Rodney Joffe was a confidential human  
13 source for the FBI?

14 A. I was told that after the fact.

15 Q. I want to go back to some of the questions about  
16 visibility.

17 So you were asked: Would it be good to know about  
18 the collection and source of DNS data that's provided to the  
19 government? Do you remember those questions?

20 A. Yes.

21 Q. Okay. And you said it would be good to know that.

22 A. Yes, it would be good to know the source.

23 Q. And if you cared about the data, and you wanted to know  
24 and have visibility, then you would want to know where the  
25 data came from, correct?

1 A. Yes, I would like to know where the data came from.

2 Q. And if you really cared about having visibility into the  
3 data, you'd want to speak to that source to figure out  
4 where, in the DNS landscape, they were getting this stuff  
5 from, correct?

6 A. So I would want to -- I would want to know where the --  
7 so any time that we're using a data source, we want to know  
8 what the provenance of that data is, so we want to know  
9 whether -- whether -- like I said, what company we purchase  
10 that data from or if it had been provided to us by a witness  
11 or a victim or someone of that nature, whether that --  
12 whether that data -- like basically where they got that data  
13 from.

14 So basically data that we, as the FBI, purchased,  
15 I would have to be able to cite what the source of that data  
16 was. And then if it was data provided by a third party, a  
17 victim or a witness, we'd want to know where that data came  
18 from.

19 Q. Okay. Let me try to ask this as a yes or no question.

20 If you cared about having visibility into DNS data  
21 in the possession of the government, you would want to know  
22 what the source of that data is, correct?

23 A. Correct.

24 Q. And finally, you know, this is a case against  
25 Mr. Sussman sitting at the table over there. You don't know

1 Mr. Sussman, correct?

2 A. I believe I met him one time, but I don't recall  
3 specifically.

4 Q. Okay. You weren't part of the FBI team that  
5 investigated allegations of links between Alfa-Bank and the  
6 Trump organization, correct?

7 A. No, I was not part of that team.

8 Q. You don't know what Mr. Sussman knows about DNS data,  
9 correct?

10 A. I have no base -- I have the documentary evidence that  
11 was provided and nothing more.

12 Q. Okay. So just to be clear, you don't know what  
13 Mr. Sussman does or doesn't know about DNS data, correct?

14 A. Correct.

15 Q. And you weren't at the meeting Mr. Sussman had with  
16 Mr. Baker on September 19, 2016, correct?

17 A. No, I was not at the meeting.

18 Q. Not part of the follow-up calls between Mr. Baker and  
19 Mr. Sussman in September 2016?

20 A. No.

21 Q. No idea what they talked about during those  
22 conversations?

23 A. No.

24 MR. BOSWORTH: Okay. Thank you, Your Honor.

25 THE COURT: Ms. Shaw?

1 MS. SHAW: Very briefly, Your Honor.

2 REDIRECT EXAMINATION

3 BY MS. SHAW:

4 Q. So Special Agent Martin, Mr. Bosworth was asking you  
5 about search warrants, things that the FBI can do that a  
6 private citizen couldn't do with respect to DNS -- finding  
7 evidence about DNS data. During the presentation you talked  
8 about the passive DNS sensors and the companies that own  
9 those.

10 Would someone at those companies be able to access  
11 their own -- the DNS data that they were collecting?

12 A. Yes, definitely.

13 Q. All right. And with respect to the FBI, when it's  
14 looking to do an investigative step such as a search  
15 warrant, would it typically want to have information about  
16 the source and the reliability of the source to be able to  
17 tell the judge so that he or she could evaluate that search  
18 warrant?

19 A. Yes. That's critical information for applying for legal  
20 process.

21 Q. Okay. Mr. Bosworth asked you about Rodney Joffe. Do  
22 you know whether Mr. Joffe is still a CHS?

23 MR. BOSWORTH: Objection.

24 THE COURT: Basis?

25 Overruled.

1                   To the extent you know.

2                   THE WITNESS: Huh?

3                   THE COURT: You may answer to the extent that you  
4 know.

5                   THE WITNESS: Okay.

6                   A. No, I have no idea.

7                   Q. Are you aware that Mr. Joffe was closed for cause as a  
8 source?

9                   A. No.

10                  MS. SHAW: I have nothing further.

11                  THE COURT: All right. Agent Martin, thank you  
12 very much for your testimony. You are excused. Please  
13 don't discuss your testimony with anyone until the case is  
14 over, okay? Have a good day.

15                  Okay. Ladies and gentlemen, feel free to stand up  
16 and stretch, if you'd like. I know those chairs aren't  
17 always as comfortable as they can be.

18                  All right. Are you all set?

19                  MR. DeFILIPPIS: Yes.

20                  THE COURT: Okay.

21                  MR. DeFILIPPIS: Your Honor, the government calls  
22 Special Agent Scott Hellman.

23                  THE COURT: All right. Mr. Hellman.

24                  Okay. Step right up, sir. Feel free to remove  
25 your mask, remain standing, and raise your right hand to be

1 sworn.

2 (Witness sworn)

3 THE COURT: Please have a seat.

4 SPECIAL AGENT SCOTT HELLMAN, Sworn

5 DIRECT EXAMINATION

6 BY MR. DeFILIPPIS:

7 Q. Good morning, Special Agent Hellman.

8 A. Good morning, sir.

9 Q. Could you state and just spell your name for the record.

10 A. Scott Hellman, spelled S-C-O-T-T, H-E-L-L-M-A-N.

11 Q. Agent Hellman, where do you currently work?

12 A. I work for the FBI.

13 Q. What's your position there?

14 A. I'm a Supervisory Special Agent.

15 Q. And what is a Supervisory Special Agent?

16 A. I don't lead my own investigations any longer; I lead a  
17 team of investigators who investigate cyber crime.

18 Q. Now, over the course of your career at the FBI,  
19 generally speaking, what kinds of work have you done?

20 A. I've spent all 14 years of my time in the FBI  
21 investigating cyber crime, and then a small amount of that  
22 time investigating intellectual property rights crimes.

23 Q. And geographically where have you been located while  
24 you're working at the FBI?

25 A. Most of my time has been spent investigating in San

1        Francisco, and then I spent three years at FBI headquarters  
2        in the D.C. area.

3                THE COURT:    Sir, would you mind explaining to the  
4        jury briefly what cyber crime is and what intellectual  
5        property crime is.

6                THE WITNESS:    Absolutely.

7                So in the FBI -- so cyber crime for us is  
8        investigating different types of hacking crimes. So someone  
9        gains unauthorized access into a computer or a computer  
10       network and maybe takes things or looks at things, a  
11       computer system that they don't have the authority to gain  
12       access to, and that would be for cyber crime.

13               Intellectual property rights crimes could be  
14       copyrights violations or you're stealing something that's  
15       considered a trade secret or maybe a trademarks violation,  
16       something along those lines.

17               THE COURT:    Thank you.

18        BY MR. DeFILIPPIS:

19        Q.    And Agent Hellman, is the FBI divided into divisions and  
20        units?

21        A.    Yes.

22        Q.    And is there something called the cyber division?

23        A.    Yes.

24        Q.    And what is -- what does the cyber division do?

25        A.    So cyber division investigates a wide range of different



1 cyber crimes from maybe financially motivated crimes, people  
2 stealing information to make money, or maybe it could be  
3 coming from a foreign country that's trying to hack into  
4 government systems or sensitive systems to steal  
5 information. A wide range of different types of cyber  
6 crimes.

7 Q. Is there another division of the FBI called the  
8 counterintelligence division?

9 A. Yes.

10 Q. And, briefly, what does the counterintelligence division  
11 do?

12 A. Counterintelligence. It's certainly not my area of  
13 expertise, but the brunt of it is they're going to be  
14 looking at foreign countries trying to gain information  
15 about the United States through a variety of means.

16 Q. And are there cases in which the cyber division and the  
17 counterintelligence division collaborate or work together?

18 A. Yes.

19 Q. Over the course of your career, have you done cyber  
20 investigations that involved national security matters?

21 A. Yes.

22 Q. How familiar or unfamiliar are you with what is known as  
23 DNS or Domain Name System data?

24 A. I know the basics about DNS.

25 Q. And in your understanding, on a very basic level, what

1 is DNS?

2 A. DNS is basically how one computer would try and  
3 communicate with another computer. It wouldn't have to be a  
4 communication, but, for example, if I'm interested in going  
5 to website XYZ.com, my computer needs to know the IP address  
6 of XYZ, so it's going to ask a question to DNS servers. And  
7 the question would be: Tell me what the IP address is for  
8 website XYZ.com.

9 And so DNS is the process of translating a domain  
10 name or a website name to that IP address so the two  
11 computers can transmit information back and forth.

12 Q. What was your position at the FBI in 2016?

13 A. Midway through 2016 I moved to FBI headquarters, and I  
14 was a program manager in cyber division.

15 Q. What does a program manager do?

16 A. So I worked with different field offices whose  
17 responsibility it was to investigate cyber crimes, so I  
18 facilitated -- tried to help those different offices  
19 coordinate together.

20 Q. Physically or geographically, where were you based?  
21 Where was your office?

22 A. I was based in Chantilly, Virginia.

23 Q. And how far or close is that from FBI headquarters in  
24 Washington, D.C.?

25 A. It's about an hour away.

1 Q. Now, did there come a time when you learned about  
2 information that the FBI received concerning a supposedly  
3 secret channel of communications between the Trump  
4 organization and a Russian bank called Alfa-Bank?

5 A. Yes.

6 Q. When was that?

7 A. That was in September of 2016.

8 Q. Do you remember beginning, end of the month? Do you  
9 remember a date?

10 A. September 19th of 2016.

11 Q. Now, in getting ready to testify today, have you  
12 reviewed documents, records, emails, and the like?

13 A. Yes.

14 Q. And so when you testify to dates, are you basing that on  
15 your refreshed recollection of that review?

16 A. Yes.

17 Q. Now, when you learned of this information that had come  
18 into the FBI, what, if anything, did you learn about who  
19 took it in, who at the FBI received it?

20 A. I learned that the information was provided to then-FBI  
21 General Counsel James Baker.

22 Q. And who alerted you to this information? Was it  
23 Mr. Baker, or was it someone else?

24 A. No, it was my supervisor at the time, Special Agent Nate  
25 Batty.

1 Q. Okay. And he was your supervisor in the cyber division?

2 A. Yes.

3 Q. Now, Agent Hellman, are you familiar with the term  
4 "chain of custody"?

5 A. Yes.

6 Q. And in FBI terms, what does "chain of custody" mean?

7 A. So chain of custody is a mechanism by which, when you  
8 collect a piece of evidence, you want to make sure you can  
9 track exactly who had custody over that evidence; and so  
10 it's essentially a piece of paper that you're going to sign  
11 or someone's going to sign when they first collect it.

12 And then if they hand the evidence to somebody  
13 else, then that person's going to need to sign it, and the  
14 next person's going to need to sign it. So if at some point  
15 you need to use that evidence, say at a trial, you have a  
16 record of everyone who has had custody over that evidence.

17 Q. Is that commonly done when evidence is collected by the  
18 FBI?

19 A. Yes.

20 Q. Now, in the case of this information I was just asking  
21 you about -- the Alfa-Bank/Trump organization information --  
22 did you play a role in any chain-of-custody process there?

23 A. Yes.

24 Q. And what was your role?

25 A. My role was to obtain signatures from people who had had

1 custody over the evidence, which were some thumb drives.

2 Q. Now, did you do that by yourself or with others?

3 A. I did it in coordination with multiple other people.

4 Q. Okay. And who were those people, to the extent you  
5 remember?

6 A. It would have been Nate Batty, who was my supervisor at  
7 the time, and another FBI employee named Jordan Kelly.

8 Q. Did you do all of that on the day the evidence or  
9 materials came into the FBI on September 19th or another  
10 day?

11 A. No. We obtained signatures for the chain of custody the  
12 next day, on September 20th.

13 Q. Why was that?

14 A. The thumb drives presumably were at FBI headquarters,  
15 and we were in Chantilly, and so we drove out the next --  
16 the subsequent day to obtain the thumb drives and obtain the  
17 signatures for the chain.

18 Q. And when you say "we drove out," who drove out?

19 A. It was me and my supervisor, Nate Batty.

20 Q. Special Agent Hellman, I'm going to show you on the  
21 screen there what's been premarked Government Exhibit 282.  
22 Do you see that document?

23 A. Yes.

24 Q. Do you recognize what it is?

25 A. I do.

1 Q. And what is it?

2 A. It's the chain of custody that we -- or I and multiple  
3 other people obtained signatures for for the evidence  
4 that -- the evidence in question.

5 Q. And do you recognize it from your involvement in  
6 actually preparing the chain and obtaining those signatures?

7 A. Yes.

8 MR. DeFILIPPIS: Your Honor, the government offers  
9 Government Exhibit 282.

10 MR. BERKOWITZ: No objection.

11 THE COURT: So moved.

12 MR. DeFILIPPIS: And, Ms. Arsenault, if we could  
13 publish that to the jury.

14 Q. Special Agent Hellman, there are a number of boxes and  
15 lines on the chain of custody. Do you see those?

16 A. Yes.

17 Q. Now, in the upper right of the chain of custody form we  
18 see it says "Signature of Seizing Individual." Can you just  
19 describe what that means.

20 A. That's basically the first person to receive a piece of  
21 evidence.

22 Q. And so in this case who was that?

23 A. James Baker, general counsel for the FBI.

24 Q. Is that the individual you mentioned before as the  
25 person you understood had received this Alfa-Bank/Trump-

1 related information?

2 A. Yes.

3 Q. And then just describe for us how does one interpret  
4 who, in order, would have taken custody of the evidence at  
5 issue? In other words, what's the order along the form?

6 A. So you're going to read the form after the initial  
7 receipt. It's going to be reading left to right. So you  
8 have someone with the initial receipt, and then you would  
9 skip to the next to the left. You would go down one row to  
10 the left.

11 So it says "Relinquished Custody." Whoever that  
12 person is would have handed it off to someone else. So in  
13 this case it would be Baker relinquishing it to Peter  
14 Strzok. So you would look to the right, and it would say  
15 "Accepted Custody," and you would continue down that path.

16 So one person hands it off to somebody else.  
17 You're going to have one person relinquish, and then the  
18 next person accepts it. And both have to sign, and so forth  
19 and so on.

20 Q. Okay. So in this case it looks like it started with  
21 Mr. Baker, and then he relinquished custody there on the top  
22 left; is that right?

23 A. Second row on the left he relinquished custody, yes.

24 Q. And to whom did Mr. Baker relinquish custody?

25 A. Peter Strzok.

1 Q. Do you recall what position Peter Strzok had at the FBI?

2 A. I believe he was in the counterintelligence division,  
3 but I don't remember what his position was.

4 Q. Okay. And then the next person to whom Mr. Strzok  
5 relinquished custody?

6 A. To Eric Sporre.

7 Q. And who is Eric Sporre?

8 A. Eric Sporre was senior executive in cyber division. He  
9 was the deputy assistant director at the time for cyber  
10 division.

11 Q. And then, according to this chain of custody, who did  
12 Mr. Sporre give the materials to?

13 A. To Nate Batty.

14 Q. And was that your supervisor who you mentioned before?

15 A. Yes.

16 Q. Okay. And then presumably, if we follow the rest, we  
17 would see who else handled the materials; is that right?

18 A. Yes.

19 Q. What is your understanding of the materials that came  
20 in? What did they consist of?

21 A. So the materials that came in were basically broken into  
22 two parts. One was some technical data, so numbers and  
23 website names or domain names; and then the other was a  
24 narrative presumably explaining -- giving a summary of that  
25 data and explaining some conclusions about whoever wrote the



1 summary, their conclusions based upon their analysis of the  
2 data.

3 Q. And returning to the chain of custody, did you actually  
4 go to Mr. Baker's office to get his signature on this form?

5 A. Yes, I did.

6 Q. And which -- did you then go to others to get their  
7 signatures, or was that handled by others?

8 A. I was able to get a signature from Mr. Baker as well as  
9 Mr. Sporre; but Peter Strzok was not available, and someone  
10 else obtained his signature.

11 Q. And when you went to Mr. Baker's office, do you remember  
12 what, if anything, was said during that discussion or during  
13 that interaction?

14 A. I remember being in the office, but I don't distinctly  
15 recall what the conversation was.

16 I do remember after the fact, though, that I was  
17 frustrated that I was not able to identify who had provided  
18 these thumb drives, this information to Mr. Baker. He was  
19 not willing to tell me.

20 Q. And if you look on the chain of custody form, is there a  
21 place on the form where you have to write where it came  
22 from, or no?

23 A. Not on this form, no.

24 Q. Okay. And is there another form that sometimes records  
25 that?

1 A. Yes.

2 Q. And what is that form called?

3 A. It's typically called a green sheet, and it's basically  
4 whenever you seize something, whether someone provides it to  
5 you voluntarily or you seize it through a court order, you  
6 write down the date and the time where you got it and where  
7 you got it from. And usually that's so at the end of the  
8 case, when you need to return pieces of evidence, you know  
9 who to return it to.

10 Q. So was it your testimony before that at the end of this  
11 process you were not able to determine where the thumb  
12 drives and the materials came from?

13 A. That's correct.

14 Q. And was that -- did you otherwise speak to Mr. Baker in  
15 connection with this case?

16 A. No.

17 Q. And so do you know whether or not Mr. Baker told others  
18 where he obtained the materials from?

19 A. I do not know.

20 Q. Now, once the materials had been logged and the chain of  
21 custody was created, were you asked to do anything in  
22 particular to analyze or otherwise do something with the  
23 materials?

24 A. Yes. I was asked to perform two tasks in tandem with  
25 Special Agent Batty, and our tasks were, number one, to look

1 at this data, look at the data and look at the narrative  
2 that it came with and identify were there any what's known  
3 as cyber equities. And by that it was, was there any  
4 allegation of a hacking. That's what cyber division does.  
5 We investigate hacking. So was there an allegation that  
6 somebody or some company or some computer had been hacked.  
7 That was first.

8 And then the second was to review the data with  
9 our technical background and provide some assessment as to  
10 what we thought about the data and what we thought about the  
11 narrative that it came with.

12 Q. And who, if anyone, assisted you or collaborated with  
13 you in that effort?

14 A. It was me and Nate Batty.

15 Q. That's your supervisor?

16 A. Yes, sir.

17 Q. Now, what principally, from the materials, did you rely  
18 on to do your analysis?

19 A. So it was really two things. It was looking at the  
20 data, the technical data itself. There was a summary that  
21 it came with. And then also we were comparing what we saw  
22 in the data, sort of the story that the data told us, and  
23 then looking at the narrative that it came with and  
24 comparing our assessment of the data to the narrative.

25 Q. If I could show you what's been premarked as Government

1 Exhibit 217, which should appear on your screen there.

2 A. Yes. It says 247.

3 Q. Okay. So looking at Government Exhibit 217, do you  
4 recognize this document?

5 A. Yes.

6 Q. And what is this?

7 A. This is essentially the summary or narrative that came  
8 along with the technical data.

9 Q. And you recognize it from having looked at it at the  
10 time?

11 A. Yes.

12 MR. DeFILIPPIS: Your Honor, the government offers  
13 Government Exhibit 217.

14 MR. BERKOWITZ: No objection.

15 THE COURT: 217's admitted.

16 MR. DeFILIPPIS: Ms. Arsenault, if we could  
17 publish that one.

18 BY MR. DeFILIPPIS:

19 Q. So Agent Hellman, I just want to direct your attention  
20 to the top level portion of that paper. What is the title  
21 of this paper?

22 A. "White Paper #1 - Auditable V3."

23 Q. Okay. And then below that, there's a heading that says  
24 "Findings." Do you understand this paper to be what you  
25 testified earlier, the document that set out the narrative

1 of allegations that Mr. Baker received?

2 A. Yes.

3 Q. And under "Findings," would you just read for the jury  
4 that section there.

5 A. Absolutely.

6 "The Trump Organization is using a very unusually-  
7 configured 'secret' email server in Pennsylvania for current  
8 and ongoing email communications with Alfa Bank (Moscow),  
9 and with Alfa Bank (Moscow) through another unusually-  
10 configured server (a 'TOR exit node') at Spectrum Health in  
11 Michigan.

12 "These servers are configured for direct  
13 communications between the Trump organization and Alfa Bank  
14 to the exclusion of all other systems.

15 "The only plausible explanation for this server  
16 configuration is that it shows the Trump Organization and  
17 Alfa Bank to be using multiple sophisticated layers of  
18 protection in order to obfuscate their considerable recent  
19 email traffic."

20 Q. Okay. Thank you.

21 Does that accord with what you remember the gist  
22 of the allegation was that you were analyzing?

23 A. Yes. That was the brunt of the allegation that came  
24 along with the data.

25 Q. And in connection with that analysis, did you also take

1 a look at the data itself that was underlying this paper?

2 A. Yes.

3 Q. And if I could show just to you on your screen what's  
4 been marked Government Exhibit 208.

5 And Agent Hellman, this is about an 18- or 19-page  
6 document. But you just see the first page here. Do you  
7 recognize this?

8 A. It appears to be a portion of the technical data that  
9 came along with the narrative.

10 MR. DeFILIPPIS: All right. Your Honor, the  
11 government offers Government Exhibit 208.

12 MR. BERKOWITZ: No objection.

13 THE COURT: So moved.

14 Q. And if we look at that first page there, Agent Hellman,  
15 what kind of data is this?

16 A. It appears to be -- as far as I can tell, it looks to  
17 be -- it's log data. So it's a log that shows a date and a  
18 time, a domain, and an IP address. And, I mean, that's --  
19 just looking at this log, there's not too much more from  
20 that.

21 Q. And do you understand this to be at least a part of the  
22 DNS data that was contained on the thumb drives that I think  
23 you testified about earlier?

24 A. Yes.

25 Q. Now, if you look towards the center of the fields of

1 data there, there's a part that says

2 "maill.trump-email.com."

3 A. Yes.

4 Q. What do you understand that to be?

5 A. The allegation that came along with this technical data  
6 was that there was a secret communication channel -- I'm  
7 trying to -- pardon me if I'm paraphrasing -- a secret  
8 communication channel between a domain controlled by the  
9 Trump organization, and that would be the maill.trump-  
10 email.com, and that was to be the domain that was alleged to  
11 be communicating with Alfa-Bank.

12 Q. Okay. And then I just want to draw your attention back  
13 to the paper we had seen, Government Exhibit 217.

14 A. Yes.

15 Q. So when this paper said in the portion you read that  
16 "The Trump Organization is using a very unusually-configured  
17 'secret' email server in Pennsylvania," did you understand  
18 the server to be the maill.trump-email.com server?

19 A. That's what was being alleged in the document, yes.

20 MR. DeFILIPPIS: And, Ms. Arsenault, if we could  
21 go to the third page of that document to the footnote.

22 Q. It says there, Agent Hellman, that "maill.trump-  
23 email.com is hosted by a Pennsylvania-based company,  
24 Listrak, which is a reasonably well known CRM" -- or  
25 customer relationship management -- "company that provides

1 large-scale distribution of marketing emails (usually  
2 sending emails to thousands of recipients hundreds of times  
3 a day)."

4 What do you understand that to be referring to,  
5 the CRM concept?

6 A. This particular piece is not something that we -- I  
7 don't really have a strong recollection of us talking  
8 through this piece considerably.

9 Q. Okay. And are you familiar with the notion of spam  
10 email?

11 A. Yes.

12 Q. And do you understand this to be similar or equivalent  
13 to spam servers?

14 A. I don't know that I would have couched this necessarily  
15 as a spam server, but perhaps something that's being used  
16 for marketing or sending marketing emails.

17 Q. Got it. But you said you didn't focus particularly  
18 strongly on that piece of this paper?

19 A. Correct.

20 Q. Okay. So tell us how you went about doing your analysis  
21 with Mr. Batty.

22 A. As I mentioned, the first piece was we had to identify  
23 was there any real allegation of hacking; and there was not.  
24 That was our first task by our supervisor. There was not.

25 The allegation was that someone purported to find



1 a secret communication channel between the Trump  
2 organization and Russia. And so we identified first that,  
3 no, we didn't think that there was any cyber equity, meaning  
4 that there was probably nothing more for cyber to  
5 investigate further, if there was no hacking crime.

6 And then the second piece was really just looking  
7 at the data, getting an understanding of what story does  
8 this data tell me, and then comparing it against the  
9 narrative that it came along with.

10 Q. And so did you and Mr. Batty do that together?

11 A. We did.

12 Q. And what did your analysis, generally speaking, find?

13 A. We did not agree with the conclusion in the paper. We  
14 did not agree that this data represented the finding of a  
15 secret channel of communication between the Trump  
16 organization and Russia.

17 Q. What were some of the reasons for that?

18 A. First, I felt that whoever had written that paper had  
19 jumped to some conclusions that were not supported by the  
20 technical data.

21 Number two, I felt that the methodology that they  
22 used to do their analysis was -- the methodology they chose  
23 was questionable to me, or it was not a way that I would  
24 have chosen to do it and felt like it was a roundabout way  
25 to go about doing it, so it was questionable.

1           And number three, just overall looking at the  
2           overall conclusion they had come to was that they had found  
3           a secret communication between Trump, the Trump  
4           organization, and Russia, and that just didn't make sense to  
5           us because we're looking at a domain. Why would a  
6           presidential candidate put their own name in the domain  
7           name, the supposedly secret domain, in a domain name that  
8           was easily connectible to the organization; and then why  
9           would it be -- that computer be connecting directly to  
10          another computer in Russia, if this was all supposed to be a  
11          secret communication. So that piece of it just didn't ring  
12          true at all.

13         Q. And when you testified earlier, I think your first  
14         reason was that some of the conclusions put forth you  
15         disagreed with or -- can you explain that a little bit more?

16         A. Yes. So in one example, I believe the researchers or  
17         whoever wrote that paper said that they had attempted to  
18         connect with this Trump email server, or purported Trump  
19         email server, and that the Trump email server returned an  
20         error message basically -- returned an error message. And  
21         from that, they were assuming that that Trump email server  
22         would only communicate with certain devices and not with  
23         theirs.

24                 And that didn't make sense to me. It was sort of  
25         like if I knocked on your door, and you told me to go away,

1 I don't want to talk to you, I'm then going to assume that  
2 you're only willing to talk to other people. I can't make  
3 that assumption. I don't know if you're willing to talk to  
4 anybody.

5 But that's what they had done. When they received  
6 an error message, they assumed that that computer wasn't  
7 willing to talk to them, but it was willing to talk to  
8 others, and there was no evidence to suggest that.

9 So assumptions like that is what I was referring  
10 to.

11 Q. And, Special Agent Hellman, putting aside the  
12 authenticity of the data or where the data might have come  
13 from, if you assume the data was real, did you agree with  
14 the paper's conclusions in terms of what that data showed?

15 A. No.

16 Q. Why was that?

17 A. The data itself, it just -- there was not enough data  
18 there to make the conclusion that there was, A, any  
19 communication or, B, any secret communication between the  
20 Trump organization and Russia.

21 Q. Okay. If I could show you what's been marked Government  
22 Exhibit 247, which will show up on your screen. Do you  
23 recognize that document, Agent Hellman?

24 A. It's not on the screen yet.

25 Q. Okay.

1 A. Yes.

2 Q. What are you looking at there?

3 A. This is the summary document that Special Agent Batty  
4 and I drafted together. It was our summary of the data.

5 MR. DeFILIPPIS: Your Honor, the government offers  
6 Government Exhibit 247.

7 MR. BERKOWITZ: No objection, subject to the  
8 agreement we had about what's in there, correct?

9 MR. DeFILIPPIS: Yes.

10 THE COURT: Okay. So moved.

11 So we'll publish that to the jury.

12 BY MR. DeFILIPPIS:

13 Q. Special Agent Hellman, how long would you say it took  
14 you and Special Agent Batty to write this up?

15 A. Inside of a day.

16 Q. Inside of a day, you said?

17 A. Yes.

18 Q. And any particular reason why it was done so quickly?

19 A. Our job was to analyze the data, draft this sort of  
20 summary, and then we were to pass our summary and the thumb  
21 drives on to the Chicago division for further analysis.

22 Q. Okay. Now, let me direct your attention to the top line  
23 of the paper there, the top paragraph.

24 Could you just read that first paragraph there.

25 A. "Assessment of the provided white paper and supporting

1 document on (2) thumb drives.

2 "SUMMARY - ECOU 1 assess there is no CyD equity in  
3 this report and that the research conducted in the report  
4 reveals some questionable investigative steps taken and  
5 conclusions drawn. This opinion is drawn from the following  
6 observations."

7 Q. Okay. First on terminology, what is "ECOU 1"?

8 A. So ECOU was the unit I was in in cyber headquarters. In  
9 stands for Eurasian Cyber Operations Unit. And we basically  
10 helped to manage field offices who were investigating cyber  
11 threats coming from Eurasia, mostly Russia.

12 Q. And then when the paper says "there is no CyD equity,"  
13 CyD?

14 A. Right. "CyD" is cyber division. And so we're saying we  
15 did not identify any allegation of hacking, so there is  
16 nothing else for CyD or cyber division to investigate  
17 further.

18 Q. It then says that "the research conducted in the report  
19 reveals some questionable investigative steps and  
20 conclusion" -- "taken and conclusions drawn. This opinion  
21 is drawn from the following observations."

22 Is that what you referred to before about the  
23 methodology for the author of this paper?

24 A. Yes.

25 Q. Now, let me ask you, were you able to determine from any

1 of these materials who had actually drafted the paper  
2 alleging the secret channel?

3 A. No.

4 Q. In other words, was it contained anywhere in the  
5 documents?

6 A. No.

7 Q. Let me direct your attention to a later part of that  
8 paper, which is the last page.

9 THE COURT: And ladies and gentlemen, you will  
10 notice that a portion of this document has been redacted.  
11 You are probably going to see that with other documents that  
12 are introduced throughout the trial. And there are lots of  
13 reasons why a certain portion of a document cannot be shown  
14 to a jury, so you are not to speculate at all as to what's  
15 behind those redactions. And it will be a pretty common  
16 occurrence in this case. Okay?

17 Go ahead.

18 Q. Special Agent Hellman, if you would just start reading  
19 where it says "it appears" at the end of that first  
20 paragraph there.

21 A. "Furthermore, it appears suspicious that the presumed  
22 suspicious activity began approximately three weeks prior to  
23 the stated start of the investigation conducted by the  
24 researcher."

25 Q. What did you mean there?

1 A. We found it to be very -- conveniently coincidental that  
2 someone was presumably looking for suspicious activity  
3 between two computers, and they started looking, and they  
4 found that the activity had just started three weeks prior.  
5 So the timing of when their investigation started and when  
6 the suspicious activity started seemed to be coincidentally  
7 close in time in proximity.

8 Q. Okay. Now, let me direct you to the next paragraph  
9 there. Just read the first sentence beginning "Finally."

10 A. "Finally, it appears abnormal that a presidential  
11 candidate, who wanted to conduct secret correspondence with  
12 the Russian government (or a Russian bank), would (1) name  
13 his secret server 'mail1.trump-email.com', (2) use a domain  
14 (trump-email.com) registered to his own organization, and  
15 then (3) communicate directly to the Russian bank's IP  
16 address (as opposed to using TOR or proxy servers)."

17 Q. So I think you testified a bit to this earlier, but what  
18 did you mean to say there?

19 A. That that -- those facts don't suggest secret  
20 communication of any sort.

21 Q. And in what respect?

22 A. That the connections to the people alleging or the  
23 organization allegedly having the secret communications were  
24 very overt. The name "Trump" was in the domain. The domain  
25 was registered to an organization associated with Trump. So

1       that doesn't suggest -- to me did not suggest secret  
2       communications.

3       Q.   Okay.  And the last sentence of that paragraph, what  
4       does that say?

5       A.   "ECOU 1 also assesses Russian state-sponsored technical  
6       sophistication to exceed the OpsSec of that suggested in the  
7       report."

8       Q.   The term -- so ECOU 1 we know.  OpsSec, what is OpsSec?

9       A.   "OpsSec" stands for operation security.

10      Q.   And what does "operation security" mean?

11      A.   It's basically either you or your organization's  
12      capability of protecting -- it could be protecting  
13      communications, protecting information, obfuscating or  
14      hiding your ability to hide secret information.

15      Q.   Okay.  And in what sense did you conclude that Russian  
16      state-sponsored technical sophistication to exceed -- ECOU  
17      assesses that Russian technical sophistication exceeds the  
18      OpsSec of that suggested in the report.  What does that  
19      mean?

20      A.   It means that this alleged communication was having --  
21      was happening fairly directly between this Trump domain and  
22      this Russian domain, and that having worked or -- having  
23      worked investigations involving Russian state-sponsored  
24      cyber capability, we believe that Russia would have a much  
25      more technical capability to hide communications; and if



1       they were to be secret, that Russia would have the ability  
2       to hide those communications. They wouldn't be so overt and  
3       direct between this Trump domain and this Russian domain.

4       Q. Now returning to the first page of your analysis.

5               So we looked at the top part, which set out your  
6       top-line conclusion. You then have a portion of the paper  
7       that says, "The investigators who conducted the research  
8       appear to have done the following."

9               Now, Special Agent Hellman, it appears to be a  
10      pretty technical discussion, but can you just tell us, in  
11      that first part of the paper, what did you set out and what  
12      did you conclude?

13      A. It looks to be that they were looking for domains  
14      associated with Trump, and the way that they did that was  
15      they looked at a list of sort of all domains and looked for  
16      domains that had the word "Trump" in them as a way to narrow  
17      down the number of domains they were looking at.

18              And then they wanted to find, well, which of that  
19      initial set of Trump domains, which of them are email  
20      servers associated with those domains. And the way they did  
21      that was to search for terms associated with email, like  
22      "mail" or other email-related terms to then narrow down  
23      their list of domains even further to be Trump-associated  
24      domains that were email servers.

25      Q. And did you opine on the soundness of that methodology?

1 In other words, did you express a view as to whether this  
2 was a good way to go about this project?

3 A. We did not -- I did not feel that that was the most  
4 expeditious way to go about identifying email servers  
5 associated with the domain.

6 Q. And why was that?

7 A. You can name an email server anything you want. It  
8 doesn't have to have the words "mail" or "SMTP" in it. And  
9 so by -- if you're just searching for those terms, I would  
10 wager to guess you would miss an actual email server because  
11 there are other -- there are other more technical ways that  
12 you can use -- basically look-up tools, Internet look-up  
13 tools where you can say, for any domain, tell me the  
14 associated email server. That's essentially like a  
15 registered email server.

16 But the way that they were doing it was they were  
17 just looking for key terms, and I think that it just didn't  
18 make sense to me why they would go about identifying email  
19 servers that way as opposed to just being able to look them  
20 up.

21 Q. Was there anything else about the methodology used here  
22 by the writer or writers of this paper that you found  
23 questionable or that you didn't agree with?

24 A. I think just the overall assumptions that were being  
25 made about that the server itself was actually communicating

1 at all. That was probably one of the biggest ones.

2 Q. And what, if anything, did you conclude about whether  
3 you believed the authors of the paper or author of the paper  
4 was fairly and neutrally conducting an analysis? Did you  
5 have an opinion either way?

6 MR. BERKOWITZ: Objection, Your Honor.

7 THE COURT: Basis?

8 MR. BERKOWITZ: Objection on foundation. He asked  
9 him his opinion. He's not qualified as an expert for that.

10 THE COURT: I'll overrule it.

11 A. Sorry, can you please repeat the question?

12 Q. Sure. Did you draw a conclusion one way or the other as  
13 to whether the authors of this paper seemed to be applying a  
14 sound methodology or whether, to the contrary, they were  
15 trying to reach a particular result? Did you --

16 A. Based upon the conclusions they drew and the assumptions  
17 that they made, I did not feel like they were objective in  
18 the conclusions that they came to.

19 Q. And any particular reasons or support for that?

20 A. Just the assumption you would have to make was so far  
21 reaching, it didn't -- it just didn't make any sense.

22 Q. And then -- okay.

23 Now, once this paper was drafted, what, if  
24 anything, did you and Mr. Batty do with it?

25 A. We drafted it, and then we sent it on to Chicago where

1       there was another FBI -- numerous other FBI individuals or  
2       employees that were performing additional analysis and  
3       investigation.

4       Q.   And going back -- before we get to Chicago, going back  
5       to your ultimate conclusions here, to what extent were you  
6       and Mr. Batty jointly comfortable that the paper you wrote  
7       reflected sound analysis?

8       A.   We both drafted this paper together, and we felt very  
9       comfortable that both of us came to the same ultimate  
10      conclusion, that we did not agree with the narrative that  
11      came along with it.

12      Q.   And to what extent were you comfortable that you and  
13      Mr. Batty had reached your conclusions independent of any  
14      personal views or any other bias or other factors?

15      A.   Very, very confident.

16      Q.   Why --

17      A.   I'm sorry, go ahead.

18      Q.   Why is that?

19      A.   Special Agent Batty and I were -- he was my supervisor,  
20      but we were also close friends, spoke regularly. And so I  
21      know that he and I shared very different views on a wide  
22      range of different topics, and as a result, we both felt  
23      very proud of the work that we did. Despite the fact that  
24      we had drastically differing views on various topics, we  
25      both came to the same conclusion when we were drafting this

1       assessment.

2       Q.   Now, you mentioned FBI Chicago.  How did they come to  
3       get involved in this?

4       A.   I don't know, other than all I was told at the time was  
5       that Chicago was performing some -- they called it like a  
6       special or special investigation, and they were going to be  
7       doing some further analysis, and we were to provide our  
8       analysis and the thumb drives to them.

9       Q.   And is it fair to say that the cyber division, which you  
10      talked about before, they passed on this or decided not to  
11      investigate it?

12     A.   Yes, correct.

13     Q.   Why was that?

14     A.   There was no cyber equity.  There was no allegation of  
15      hacking, so there was no hacking crime for us to investigate  
16      further.

17     Q.   Is it your understanding that the FBI opened an  
18      investigation into this matter?

19     A.   I believe that's true.

20     Q.   And was that Chicago, FBI Chicago?

21     A.   I think so.

22     Q.   Okay.  Now, did you have any subsequent involvement in  
23      any investigation that was done?

24     A.   Certainly no involvement in the investigation.  I did  
25      have some communication with some of the agents in Chicago

1       briefly after this event.

2       Q.   To the extent you recall, what were the name or names of  
3       those agents?

4       A.   Primarily it was Allison Sands, Special Agent Allison  
5       Sands, and then one or two emails with Special Agent Curtis  
6       Hiede.

7       Q.   Generally speaking, what was the nature of your  
8       interactions after you had done this paper, interactions  
9       with them?

10      A.   Primarily with Allison, it was to discuss our assessment  
11      of this document or assessment of this technical data, and  
12      to get an understanding of whether she and Chicago had come  
13      to the same conclusions that we had.

14      Q.   And over the course of your discussions, what did you  
15      find about that or hear about that?

16      A.   That Chicago had looked at the data further and had  
17      agreed with our assessment that they also did not concur  
18      with this idea that there was a secret communication channel  
19      between the Trump organization and Russia.

20      Q.   When the FBI opens an inquiry or some kind of  
21      investigation, are there different levels or types of  
22      investigations?

23      A.   There are.

24      Q.   And can you just explain to the jury what those levels  
25      are.

1       A. So there's basically three levels. We have assessments  
2       and preliminary investigations and full investigations, and  
3       you have to have a certain amount of data and facts before  
4       you can open one of those various different levels.

5       Q. Could you just explain to the jury the levels in order  
6       of sort of least expansive and most expansive and what might  
7       affect the level of an investigation?

8       A. Sure. So if you have specific articulable facts that a  
9       crime has occurred, then you can open a full investigation.

10             If you've got an allegation that something's  
11       happened, that this crime has occurred, as opposed to very  
12       specific facts, then you could open a preliminary.

13             I don't remember the specific language for an  
14       assessment, but essentially the assessment is the lowest  
15       form of investigation.

16             And the different -- the main difference between  
17       them is once you open one of those up, you have different  
18       investigative tools that you're allowed to use.

19             For the lowest level, you only have a very small  
20       number of things you can do. For example, if I only opened  
21       an assessment, I can't go and perform a search warrant or go  
22       into someone's home; whereas, if you open a full  
23       investigation, you have many more investigative tools that  
24       you're allowed to use. But, of course, that has to be  
25       predicated on specific facts that you believe -- that you

1 believe in that show that a crime has occurred.

2 Q. And does the FBI, in your experience, sometimes take  
3 information to trigger investigations from individuals  
4 outside the FBI?

5 A. Absolutely.

6 Q. And in determining what level of investigation would be  
7 triggered, how, if at all, can it be relevant the motivation  
8 of whoever is giving you the information?

9 A. The motivation of whoever is giving me the information  
10 is very relevant because it's going to provide context for  
11 me to decide how much I trust or believe in that  
12 information.

13 So if I believe that information, I believe it's a  
14 fact, then I might be able to then justify opening a full  
15 investigation. But if I -- depending upon where it's coming  
16 from, if I feel, hmm, the motive that they have suggests  
17 that I may not believe in the information or I might need  
18 more information to help me understand how truthful it is, I  
19 may not be able to open that full investigation.

20 Q. And if someone has motivations that the FBI might  
21 consider suspect or not fully neutral or pure, how might, if  
22 at all, that affect whether an assessment, a preliminary, or  
23 a full investigation is opened?

24 A. If someone has motives that are not -- that are very  
25 questionable, I may not open that full investigation. I



1 might want to collect more independent data to support  
2 whatever the allegation is, so I might open a lower-level  
3 investigation initially, if at all.

4 Q. In this case, the Alfa-Bank --

5 THE COURT: Mr. DeFilippis, how much longer?

6 MR. DeFILIPPIS: Your Honor, I'd say less than  
7 five minutes.

8 THE COURT: Okay.

9 Q. In the case of the Alfa-Bank allegations, do you know  
10 what kind of investigation was opened or not?

11 A. I think it was a full, but I didn't know at the time.

12 Q. Okay. Let me ask you this: Would it have mattered to  
13 you to know where this data came from?

14 A. It would, yes.

15 Q. Why?

16 A. It would have mattered -- well, I think on one hand it  
17 would not have mattered from the technical standpoint. If  
18 I'm looking at technical data, the data's going to tell me  
19 whatever story the data's going to tell me independent of  
20 where it comes from. So I still would have done the same  
21 technical analysis.

22 But knowing where the data comes from helps to  
23 tell me -- it gives me context regarding how much I believe  
24 in the data, how authentic it is, do I believe it's real,  
25 and do I trust it.

1 Q. Now, would it have mattered to you or not whether the  
2 data came from someone with a political affiliation or  
3 motivation? To what extent would that matter to you?

4 A. It would matter for the same reasons; that it's going to  
5 be a data point that I take into consideration when -- if I  
6 were to be the person to open a case, in this case it wasn't  
7 me, but I would use that as a data point to help me  
8 determine what my sort of initial steps are going to be.

9 Q. To what extent would it matter to you whether the data  
10 came from someone who had a business interest or  
11 relationship with the U.S. government?

12 A. For the same reasons, I would want to know. It's going  
13 to have the same impact. I'm going to look at it, and it's  
14 going to give me some context to help me understand how  
15 truthful the data might be.

16 Q. And to what extent would it have mattered, if at all, if  
17 the person giving you the data was doing it on their own  
18 behalf or someone else's behalf?

19 A. It would be a data point that I would want to know.

20 Q. And why is that?

21 A. Well, if someone is providing the data on someone else's  
22 behalf, I'm going to want to know who that someone else is  
23 so I can understand what their motivations might be for  
24 providing the data.

25 MR. DeFILIPPIS: Okay. Thank you very much,

1 Special Agent Hellman.

2 THE WITNESS: Thank you.

3 THE COURT: Okay. Ladies and gentlemen, we're  
4 going to take our lunch break. We'll take about an hour and  
5 ten minutes, so if you could reconvene at 2:00. Feel free  
6 to eat in the cafeteria or walk outside.

7 No discussion about the case. No research about  
8 the case. Have a nice lunch, and we'll be ready to go at  
9 2:00.

10 (Jury exits courtroom)

11 THE COURT: Agent Hellman, you can step down.  
12 Please don't discuss your testimony over the lunch hour,  
13 okay?

14 All right. We're adjourned. See you at 2:00,  
15 unless there's something -- have a seat everybody.

16 THE COURTROOM DEPUTY: There's nothing.

17 THE COURT: Mr. Bosworth, do you have something?

18 MR. BOSWORTH: Yes, Your Honor, briefly. Either  
19 now or after lunch, whatever the Court's preference is.

20 THE COURT: Let's do it when we get back.

21 MR. BOSWORTH: Okay.

22 (Lunch recess taken)

23

24

25

**CERTIFICATE OF OFFICIAL COURT REPORTER**

I, LISA A. MOREIRA, RDR, CRR, do hereby  
certify that the above and foregoing constitutes a true and  
accurate transcript of my stenographic notes and is a full,  
true and complete transcript of the proceedings to the best  
of my ability.

Dated this 17th day of May, 2022.

/s/Lisa A. Moreira, RDR, CRR  
Official Court Reporter  
United States Courthouse  
Room 6718  
333 Constitution Avenue, NW  
Washington, DC 20001

<p>'<b>mail1.trump</b>'<sup>[1]</sup> - 384:13  '<b>mail1.trump-email.com</b>'<sup>[1]</sup> - 384:13  '<b>secret</b>'<sup>[2]</sup> - 374:7, 376:17  '<b>TOR</b>'<sup>[1]</sup> - 374:10</p>	<p><b>2010</b><sup>[1]</sup> - 343:22  <b>2016</b><sup>[16]</sup> - 265:25, 278:25, 283:19, 285:5, 290:17, 294:5, 299:5, 300:4, 300:5, 354:17, 357:16, 357:19, 363:12, 363:13, 364:7, 364:10  <b>2017</b><sup>[2]</sup> - 289:4, 310:14  <b>2018</b><sup>[1]</sup> - 306:6  <b>2019</b><sup>[1]</sup> - 306:9  <b>202</b><sup>[1]</sup> - 250:24  <b>2020</b><sup>[1]</sup> - 306:11  <b>2022</b><sup>[2]</sup> - 250:4, 397:8  <b>208</b><sup>[2]</sup> - 375:4, 375:11  <b>20th</b><sup>[1]</sup> - 366:12  <b>21-582</b><sup>[1]</sup> - 252:3  <b>212</b><sup>[2]</sup> - 250:16, 250:20  <b>217</b><sup>[4]</sup> - 373:1, 373:3, 373:13, 376:13  <b>217's</b><sup>[1]</sup> - 373:15  <b>247</b><sup>[3]</sup> - 373:2, 380:22, 381:6  <b>282</b><sup>[2]</sup> - 366:21, 367:9  <b>29th</b><sup>[1]</sup> - 265:25  <b>2:00</b><sup>[3]</sup> - 396:5, 396:9, 396:14</p>	<p><b>7</b></p> <p><b>70</b><sup>[1]</sup> - 320:24</p> <p><b>8</b></p> <p><b>8:14</b><sup>[1]</sup> - 338:24</p> <p><b>9</b></p> <p><b>9</b><sup>[1]</sup> - 254:11  <b>90</b><sup>[1]</sup> - 255:19  <b>906-1200</b><sup>[1]</sup> - 250:20  <b>9:07</b><sup>[1]</sup> - 250:5</p>	<p><b>Action</b><sup>[1]</sup> - 250:3  <b>actions</b><sup>[1]</sup> - 310:2  <b>activities</b><sup>[3]</sup> - 266:10, 285:9, 286:16  <b>activity</b><sup>[4]</sup> - 383:22, 384:2, 384:4, 384:6  <b>actors</b><sup>[1]</sup> - 346:12  <b>actual</b><sup>[5]</sup> - 288:20, 339:23, 340:14, 350:3, 387:10  <b>addition</b><sup>[4]</sup> - 321:23, 322:5, 323:3, 323:9  <b>additional</b><sup>[2]</sup> - 350:25, 389:2  <b>address</b><sup>[37]</sup> - 253:12, 282:13, 299:12, 326:13, 326:14, 327:19, 328:11, 328:13, 328:19, 329:1, 329:17, 329:22, 330:4, 330:18, 330:22, 330:24, 331:9, 331:11, 331:22, 332:2, 332:6, 332:8, 332:12, 332:17, 335:7, 337:4, 339:1, 339:18, 339:19, 340:11, 340:24, 343:23, 363:5, 363:7, 363:10, 375:18, 384:16  <b>addressed</b><sup>[1]</sup> - 253:16  <b>addresses</b><sup>[9]</sup> - 257:23, 325:6, 325:17, 326:18, 328:17, 329:15, 329:24, 340:7, 340:21  <b>addressing</b><sup>[1]</sup> - 342:12  <b>adjoined</b><sup>[1]</sup> - 396:14  <b>administration</b><sup>[1]</sup> - 307:5  <b>administrators</b><sup>[1]</sup> - 340:25  <b>admission</b><sup>[2]</sup> - 276:19, 277:5  <b>admit</b><sup>[1]</sup> - 324:18  <b>admitted</b><sup>[3]</sup> - 275:22, 289:7, 373:15  <b>Advanced</b><sup>[1]</sup> - 320:8  <b>advanced</b><sup>[1]</sup> - 320:10  <b>adversary</b><sup>[1]</sup> - 279:4  <b>advice</b><sup>[2]</sup> - 295:1, 299:2  <b>advising</b><sup>[1]</sup> - 298:13  <b>affect</b><sup>[4]</sup> - 341:23, 347:14, 392:7,</p>	<p>393:22  <b>affected</b><sup>[6]</sup> - 255:7, 256:2, 256:16, 264:19, 312:4, 319:2  <b>affiliation</b><sup>[1]</sup> - 395:2  <b>affiliations</b><sup>[1]</sup> - 312:21  <b>afoot</b><sup>[1]</sup> - 312:9  <b>agencies</b><sup>[2]</sup> - 292:19, 298:21  <b>agency</b><sup>[2]</sup> - 288:14, 292:25  <b>agendas</b><sup>[1]</sup> - 279:20  <b>Agent</b><sup>[49]</sup> - 253:17, 253:21, 253:24, 255:12, 256:4, 257:16, 257:24, 258:4, 258:21, 316:7, 316:19, 316:23, 316:24, 317:2, 323:16, 323:21, 324:5, 324:9, 327:22, 338:19, 348:2, 348:6, 358:4, 359:11, 359:22, 360:7, 360:11, 360:14, 360:15, 361:19, 365:3, 366:20, 367:14, 371:25, 373:19, 375:5, 375:14, 376:22, 380:11, 380:23, 381:3, 381:13, 381:14, 383:18, 386:9, 389:19, 396:1, 396:11  <b>agent</b><sup>[13]</sup> - 255:24, 260:2, 261:18, 265:3, 267:7, 268:18, 318:17, 319:7, 364:24, 391:4, 391:5  <b>AGENT</b><sup>[4]</sup> - 251:3, 251:6, 316:16, 360:4  <b>agents</b><sup>[8]</sup> - 257:3, 291:9, 303:9, 319:20, 319:22, 321:16, 390:25, 391:3  <b>ago</b><sup>[2]</sup> - 306:17, 306:21  <b>agree</b><sup>[10]</sup> - 262:10, 292:18, 293:21, 315:10, 343:4, 378:13, 378:14, 380:13, 387:23, 389:10  <b>agreed</b><sup>[6]</sup> - 280:20,</p>
/				
/s/Lisa <sup>[1]</sup> - 397:10				
<b>1</b>		<b>A</b>		
<p><b>1</b><sup>[7]</sup> - 254:10, 373:22, 382:2, 382:7, 384:12, 385:5, 385:8  <b>1.2.3.4</b><sup>[1]</sup> - 325:18  <b>1.2.3.5</b><sup>[1]</sup> - 325:18  <b>10</b><sup>[2]</sup> - 254:24, 341:21  <b>10020</b><sup>[1]</sup> - 250:20  <b>108.18.158.20</b><sup>[1]</sup> - 327:20  <b>11:00</b><sup>[1]</sup> - 315:17  <b>12</b><sup>[2]</sup> - 271:23, 298:7  <b>1271</b><sup>[1]</sup> - 250:19  <b>13</b><sup>[3]</sup> - 317:5, 317:21, 329:14  <b>14</b><sup>[1]</sup> - 360:20  <b>145</b><sup>[1]</sup> - 250:15  <b>14th</b><sup>[1]</sup> - 265:14  <b>15</b><sup>[2]</sup> - 315:15, 315:24  <b>16</b><sup>[2]</sup> - 253:9, 271:22  <b>17</b><sup>[1]</sup> - 250:4  <b>1700</b><sup>[3]</sup> - 324:15, 324:16, 324:19  <b>17th</b><sup>[1]</sup> - 397:8  <b>18</b><sup>[1]</sup> - 375:5  <b>18th</b><sup>[3]</sup> - 280:6, 302:18, 302:19  <b>19</b><sup>[2]</sup> - 278:24, 357:16  <b>19-page</b><sup>[1]</sup> - 375:5  <b>19th</b><sup>[4]</sup> - 263:19, 304:7, 364:10, 366:9  <b>1:21-cr-00582-CRC-1</b><sup>[1]</sup> - 250:4</p>	<p><b>2022</b><sup>[2]</sup> - 250:4, 397:8  <b>208</b><sup>[2]</sup> - 375:4, 375:11  <b>20th</b><sup>[1]</sup> - 366:12  <b>21-582</b><sup>[1]</sup> - 252:3  <b>212</b><sup>[2]</sup> - 250:16, 250:20  <b>217</b><sup>[4]</sup> - 373:1, 373:3, 373:13, 376:13  <b>217's</b><sup>[1]</sup> - 373:15  <b>247</b><sup>[3]</sup> - 373:2, 380:22, 381:6  <b>282</b><sup>[2]</sup> - 366:21, 367:9  <b>29th</b><sup>[1]</sup> - 265:25  <b>2:00</b><sup>[3]</sup> - 396:5, 396:9, 396:14</p>	<p><b>a.m</b><sup>[2]</sup> - 250:5, 315:17  <b>ability</b><sup>[6]</sup> - 268:2, 292:14, 347:14, 385:14, 386:1, 397:7  <b>able</b><sup>[18]</sup> - 258:25, 265:10, 304:18, 308:12, 329:6, 340:5, 340:10, 345:16, 356:15, 358:10, 358:16, 370:8, 370:17, 371:11, 382:25, 387:19, 393:14, 393:19  <b>abnormal</b><sup>[1]</sup> - 384:10  <b>absence</b><sup>[1]</sup> - 268:2  <b>absolutely</b><sup>[3]</sup> - 361:6, 374:5, 393:5  <b>abstracted</b><sup>[1]</sup> - 333:10  <b>academic</b><sup>[1]</sup> - 324:5  <b>accept</b><sup>[1]</sup> - 276:12  <b>Accepted</b><sup>[1]</sup> - 368:15  <b>accepts</b><sup>[1]</sup> - 368:18  <b>access</b><sup>[11]</sup> - 254:23, 278:19, 284:22, 285:6, 286:18, 351:13, 353:3, 353:6, 358:10, 361:9, 361:12  <b>accord</b><sup>[1]</sup> - 374:21  <b>according</b><sup>[1]</sup> - 369:11  <b>account</b><sup>[1]</sup> - 341:9  <b>accuracy</b><sup>[1]</sup> - 259:3  <b>accurate</b><sup>[3]</sup> - 267:2, 268:15, 397:5  <b>accused</b><sup>[1]</sup> - 256:19  <b>achieve</b><sup>[1]</sup> - 279:9  <b>acronym</b><sup>[1]</sup> - 342:21  <b>acting</b><sup>[8]</sup> - 270:7, 270:17, 272:19, 272:21, 282:6, 283:21, 290:23, 307:7</p>		
	<b>3</b>			
	<p><b>3</b><sup>[3]</sup> - 254:10, 265:16, 384:15  <b>30</b><sup>[1]</sup> - 303:6  <b>316</b><sup>[1]</sup> - 251:4  <b>333</b><sup>[2]</sup> - 250:23, 397:12  <b>348</b><sup>[1]</sup> - 251:4  <b>354-3187</b><sup>[1]</sup> - 250:24  <b>358</b><sup>[1]</sup> - 251:5  <b>360</b><sup>[1]</sup> - 251:6</p>			
	<b>4</b>			
	<p><b>4</b><sup>[1]</sup> - 254:11  <b>42-word</b><sup>[1]</sup> - 290:10</p>			
	<b>5</b>			
	<b>6</b>			
<p><b>2</b><sup>[3]</sup> - 255:18, 382:1, 384:13  <b>20</b><sup>[3]</sup> - 254:24, 315:15, 322:1  <b>200</b><sup>[2]</sup> - 322:22, 322:25  <b>20001</b><sup>[2]</sup> - 250:24, 397:13  <b>20002</b><sup>[1]</sup> - 250:15  <b>2009</b><sup>[1]</sup> - 317:6</p>	<p><b>50</b><sup>[1]</sup> - 319:22</p> <p><b>637-2231</b><sup>[1]</sup> - 250:16  <b>6718</b><sup>[2]</sup> - 250:23, 397:12  <b>6th</b><sup>[1]</sup> - 338:23</p>			

<p>280:21, 295:4, 299:19, 300:15, 391:17</p> <p><b>agreement</b> [2] - 334:10, 381:8</p> <p><b>ahead</b> [5] - 261:13, 327:25, 329:8, 383:17, 389:17</p> <p><b>air</b> [1] - 290:1</p> <p><b>alerted</b> [1] - 364:22</p> <p><b>Alfa</b> [32] - 263:11, 263:16, 264:17, 265:4, 265:19, 266:18, 267:24, 269:14, 269:19, 281:10, 285:15, 286:16, 286:20, 288:15, 289:14, 299:17, 305:12, 307:9, 309:9, 310:5, 312:15, 357:5, 364:4, 365:21, 367:25, 374:8, 374:9, 374:13, 374:17, 376:11, 394:4, 394:9</p> <p><b>Alfa-bank</b> [23] - 263:11, 263:16, 264:17, 265:4, 266:18, 269:14, 269:19, 281:10, 285:15, 286:16, 286:20, 288:15, 289:14, 299:17, 305:12, 307:9, 309:9, 312:15, 357:5, 364:4, 376:11, 394:4, 394:9</p> <p><b>Alfa-Bank's</b> [1] - 265:19</p> <p><b>Alfa-Bank/Trump</b> [2] - 365:21, 367:25</p> <p><b>Algor</b> [2] - 252:11, 274:9</p> <p><b>ALGOR</b> [1] - 250:13</p> <p><b>Alice</b> [7] - 344:10, 345:4, 345:7, 345:11, 345:16, 345:17, 345:18</p> <p><b>Alice's</b> [2] - 344:18, 345:2</p> <p><b>alike</b> [1] - 298:9</p> <p><b>allegation</b> [12] - 257:14, 372:4, 372:5, 374:22, 374:23, 376:5, 377:23, 377:25, 382:15, 390:14, 392:10, 394:2</p> <p><b>allegations</b> [24] -</p>	<p>258:19, 264:4, 269:15, 269:17, 272:20, 279:1, 279:3, 281:16, 281:24, 282:17, 286:21, 288:5, 288:9, 288:15, 288:16, 289:15, 291:10, 307:10, 307:20, 310:6, 312:15, 357:5, 374:1, 394:9</p> <p><b>alleged</b> [4] - 256:21, 376:10, 376:19, 385:20</p> <p><b>allegedly</b> [1] - 384:23</p> <p><b>alleges</b> [2] - 270:17, 270:19</p> <p><b>alleging</b> [2] - 383:2, 384:22</p> <p><b>Allison</b> [3] - 391:4, 391:10</p> <p><b>allow</b> [5] - 253:19, 253:20, 260:25, 261:2, 268:7</p> <p><b>allowed</b> [2] - 392:18, 392:24</p> <p><b>almost</b> [2] - 254:14, 331:10</p> <p><b>alone</b> [6] - 253:25, 254:7, 287:19, 306:20, 313:23, 314:6</p> <p><b>alongside</b> [3] - 293:25, 294:1, 295:19</p> <p><b>alternate</b> [3] - 272:2, 272:6, 272:9</p> <p><b>alternates</b> [3] - 271:24, 272:1, 272:4</p> <p><b>amazon</b> [2] - 341:9, 341:11</p> <p><b>Amendment</b> [1] - 252:22</p> <p><b>America</b> [2] - 252:4, 343:14</p> <p><b>AMERICA</b> [1] - 250:3</p> <p><b>American</b> [1] - 295:7</p> <p><b>Americas</b> [1] - 250:19</p> <p><b>amount</b> [3] - 254:14, 360:21, 392:3</p> <p><b>amounts</b> [2] - 284:23, 285:6</p> <p><b>analogy</b> [1] - 333:3</p> <p><b>Analysis</b> [3] - 317:3, 320:7, 320:24</p> <p><b>analysis</b> [23] - 256:8, 300:20, 319:11, 321:1, 321:6, 322:3, 323:14, 323:23, 370:1, 372:18,</p>	<p>374:25, 377:20, 378:12, 378:22, 381:21, 386:4, 388:4, 389:2, 389:7, 390:7, 390:8, 394:21</p> <p><b>analyst</b> [1] - 342:12</p> <p><b>analyst's</b> [1] - 341:23</p> <p><b>analysts</b> [1] - 341:25</p> <p><b>analyze</b> [4] - 320:12, 348:14, 371:22, 381:19</p> <p><b>analyzed</b> [3] - 257:12, 258:1, 300:17</p> <p><b>analyzing</b> [2] - 318:10, 374:22</p> <p><b>Andrew</b> [2] - 252:10, 274:8</p> <p><b>ANDREW</b> [1] - 250:12</p> <p><b>anonymous</b> [3] - 289:9, 342:23, 342:25</p> <p><b>anonymously</b> [2] - 344:12, 346:11</p> <p><b>answer</b> [15] - 276:22, 276:25, 277:3, 297:8, 330:23, 331:23, 332:13, 335:6, 335:9, 336:25, 337:7, 354:23, 354:25, 355:2, 359:3</p> <p><b>answered</b> [3] - 276:23, 336:24, 336:25</p> <p><b>answers</b> [2] - 297:14, 334:12</p> <p><b>Antonakakis</b> [1] - 252:21</p> <p><b>apart</b> [1] - 320:15</p> <p><b>apologies</b> [1] - 327:6</p> <p><b>apologize</b> [1] - 268:13</p> <p><b>appear</b> [2] - 373:1, 386:8</p> <p><b>appearance</b> [1] - 257:22</p> <p><b>appearances</b> [1] - 252:10</p> <p><b>APPEARANCES</b> [1] - 250:11</p> <p><b>appliances</b> [1] - 341:2</p> <p><b>apply</b> [2] - 278:22, 283:2</p> <p><b>applying</b> [2] - 358:19, 388:13</p> <p><b>appreciate</b> [1] - 314:10</p> <p><b>approached</b> [3] - 277:24, 278:2, 289:13</p> <p><b>approaching</b> [1] - 289:15</p>	<p><b>area</b> [6] - 323:10, 323:18, 323:22, 353:13, 361:2, 362:12</p> <p><b>area.</b> [1] - 323:17</p> <p><b>areas</b> [2] - 322:8, 324:4</p> <p><b>argument</b> [3] - 260:19, 260:22, 293:6</p> <p><b>argument's</b> [2] - 327:10, 327:20</p> <p><b>arguments</b> [3] - 276:1, 276:3, 276:4</p> <p><b>arise</b> [1] - 276:10</p> <p><b>arose</b> [1] - 319:24</p> <p><b>arranged</b> [2] - 286:5, 302:9</p> <p><b>array</b> [1] - 319:6</p> <p><b>arrived</b> [1] - 266:21</p> <p><b>Arsenault</b> [5] - 252:25, 274:9, 367:12, 373:16, 376:20</p> <p><b>articles</b> [2] - 323:10, 323:13</p> <p><b>articulable</b> [1] - 392:8</p> <p><b>aside</b> [2] - 298:5, 380:11</p> <p><b>asserting</b> [1] - 259:10</p> <p><b>assess</b> [1] - 382:2</p> <p><b>assesses</b> [2] - 385:5, 385:17</p> <p><b>assessment</b> [11] - 372:9, 372:24, 381:25, 390:1, 391:10, 391:11, 391:17, 392:14, 392:21, 393:22</p> <p><b>assessments</b> [1] - 392:1</p> <p><b>assigned</b> [1] - 317:24</p> <p><b>assignment</b> [1] - 317:24</p> <p><b>assistant</b> [1] - 369:9</p> <p><b>assisted</b> [1] - 372:12</p> <p><b>associated</b> [7] - 384:25, 386:14, 386:20, 386:21, 386:23, 387:5, 387:14</p> <p><b>associates</b> [2] - 285:9, 294:14</p> <p><b>associates'</b> [1] - 286:15</p> <p><b>assume</b> [3] - 347:14, 380:1, 380:13</p> <p><b>assumed</b> [1] - 380:6</p> <p><b>assuming</b> [2] - 308:12, 379:21</p> <p><b>assumption</b> [3] - 312:6, 380:3, 388:20</p>	<p><b>assumptions</b> [3] - 380:9, 387:24, 388:16</p> <p><b>assurance</b> [1] - 322:12</p> <p><b>attacks</b> [2] - 321:25, 341:4</p> <p><b>attempted</b> [1] - 379:17</p> <p><b>attention</b> [8] - 272:11, 278:14, 293:3, 311:13, 373:19, 376:12, 381:22, 383:7</p> <p><b>attorney</b> [10] - 275:8, 280:6, 287:14, 307:12, 307:20, 307:25, 308:6, 308:23, 309:3, 351:24</p> <p><b>Attorney</b> [2] - 307:7, 323:6</p> <p><b>Attorney's</b> [1] - 352:9</p> <p><b>attorneys</b> [4] - 276:18, 277:17, 324:3, 352:6</p> <p><b>Attorneys</b> [1] - 323:8</p> <p><b>attractive</b> [1] - 287:23</p> <p><b>auditable</b> [1] - 373:22</p> <p><b>aunt</b> [7] - 327:11, 327:18, 329:4, 330:5, 333:22, 333:23, 336:19</p> <p><b>aunt's</b> [1] - 339:24</p> <p><b>authentic</b> [1] - 394:24</p> <p><b>authenticity</b> [2] - 258:23, 380:12</p> <p><b>author</b> [2] - 382:23, 388:3</p> <p><b>authoritative</b> [2] - 330:23, 331:20</p> <p><b>authoritatively</b> [1] - 332:1</p> <p><b>authority</b> [2] - 352:10, 361:11</p> <p><b>authorize</b> [1] - 296:17</p> <p><b>authorized</b> [1] - 308:21</p> <p><b>authors</b> [2] - 388:3, 388:13</p> <p><b>automates</b> [1] - 344:20</p> <p><b>automatically</b> [1] - 338:17</p> <p><b>available</b> [3] - 255:19, 343:22, 370:9</p> <p><b>Avenue</b> [4] - 250:19, 250:23, 279:5, 397:12</p> <p><b>avoid</b> [2] - 277:11, 277:17</p> <p><b>award</b> [1] - 323:7</p> <p><b>awards</b> [4] - 323:4,</p>
---	--	---	--	---

<p>323:5, 323:8, 323:9  <b>aware</b> [8] - 264:9,  266:17, 300:1,  301:19, 354:6,  354:12, 355:12,  359:7</p>	<p>384:12  <b>bank's</b> [1] - 384:15  <b>Bank's</b> [1] - 265:19  <b>Bank/Trump</b> [2] -  365:21, 367:25  <b>base</b> [1] - 357:10  <b>based</b> [12] - 259:6,  259:19, 260:21,  292:4, 303:14,  324:4, 336:2,  363:20, 363:22,  370:1, 376:23,  388:16  <b>basic</b> [7] - 262:20,  339:15, 343:5,  349:11, 350:2,  350:14, 362:25  <b>basics</b> [2] - 291:12,  362:24  <b>basing</b> [1] - 364:14  <b>basis</b> [3] - 280:21,  358:24, 388:7  <b>Batty</b> [14] - 364:25,  366:6, 366:19,  369:13, 371:25,  372:14, 377:21,  378:10, 381:3,  381:14, 388:24,  389:6, 389:13,  389:19  <b>bear</b> [2] - 258:18,  265:13  <b>became</b> [2] - 298:12,  348:16  <b>becomes</b> [1] - 267:25  <b>BEFORE</b> [1] - 250:10  <b>began</b> [3] - 272:13,  292:12, 383:22  <b>begin</b> [6] - 271:4,  274:25, 275:7,  276:8, 278:11,  278:14  <b>beginning</b> [4] -  290:17, 312:8,  364:8, 384:9  <b>begins</b> [2] - 272:5,  336:17  <b>behalf</b> [31] - 270:17,  272:19, 272:21,  279:13, 280:13,  281:3, 281:21,  282:6, 282:9, 284:5,  288:10, 288:19,  288:21, 289:8,  290:12, 300:12,  306:1, 306:8, 307:1,  307:12, 307:14,  307:20, 307:25,  308:2, 308:6,  314:11, 314:12,</p>	<p>330:5, 395:18,  395:22  <b>behest</b> [1] - 264:10  <b>behind</b> [9] - 310:5,  311:22, 329:7,  330:12, 330:14,  333:9, 346:1,  348:12, 383:15  <b>believability</b> [1] -  276:16  <b>believes</b> [1] - 302:16  <b>below</b> [1] - 373:23  <b>benefit</b> [2] - 301:17,  301:19  <b>BERKOWITZ</b> [18] -  250:17, 261:25,  262:12, 262:15,  265:21, 266:5,  266:7, 266:14,  266:23, 267:13,  270:5, 274:15,  367:10, 373:14,  375:12, 381:7,  388:6, 388:8  <b>Berkowitz</b> [5] -  265:20, 269:12,  274:14, 274:17,  315:4  <b>best</b> [1] - 397:6  <b>better</b> [2] - 297:20,  344:3  <b>between</b> [32] - 257:22,  264:2, 281:9,  285:19, 286:5,  292:24, 294:11,  294:12, 299:16,  303:18, 305:12,  338:15, 339:24,  340:7, 340:10,  346:1, 349:23,  350:4, 357:5,  357:18, 364:3,  374:13, 376:8,  378:1, 378:15,  379:3, 380:19,  384:3, 385:21,  386:3, 391:19,  392:16  <b>beyond</b> [7] - 273:1,  273:4, 273:14,  273:18, 273:21,  279:25, 297:14  <b>bias</b> [2] - 313:19,  389:14  <b>bidding</b> [1] - 308:19  <b>big</b> [6] - 277:13,  285:22, 295:17,  296:23, 302:2,  303:12  <b>bigger</b> [1] - 283:8</p>	<p><b>biggest</b> [1] - 388:1  <b>billed</b> [5] - 288:8,  289:15, 290:14,  301:20, 301:25  <b>billing</b> [7] - 287:25,  288:2, 288:3,  290:13, 291:22,  291:23, 301:21  <b>bills</b> [2] - 288:4,  301:23  <b>bit</b> [11] - 294:9, 298:2,  298:3, 321:10,  325:6, 327:23,  335:14, 337:14,  344:3, 379:15,  384:17  <b>biz</b> [2] - 329:19,  331:17  <b>black</b> [2] - 290:13,  307:11  <b>block</b> [3] - 334:18,  341:4, 341:12  <b>Bob</b> [3] - 345:4, 345:5,  347:12  <b>Bob's</b> [1] - 345:12  <b>bolster</b> [1] - 264:13  <b>book</b> [5] - 325:7,  326:1, 326:3, 326:7,  328:12  <b>Bosworth</b> [8] - 259:15,  259:16, 274:18,  293:15, 315:12,  358:4, 358:21,  396:17  <b>BOSWORTH</b> [18] -  250:17, 259:17,  260:5, 260:8,  293:16, 293:18,  301:1, 304:1,  323:20, 324:21,  348:5, 355:7, 355:9,  355:11, 357:24,  358:23, 396:18,  396:21  <b>Bosworth)</b>.....  ..... [1] - 251:4  <b>bottom</b> [2] - 256:25,  347:12  <b>bought</b> [1] - 292:7  <b>bounds</b> [1] - 259:7  <b>boxes</b> [1] - 367:14  <b>brackets</b> [1] - 336:18  <b>breach</b> [1] - 292:24  <b>breadth</b> [1] - 256:12  <b>break</b> [3] - 315:14,  396:4  <b>brief</b> [4] - 275:10,  275:16, 276:3, 307:4  <b>briefed</b> [1] - 291:6  <b>briefing</b> [3] - 307:6,</p>	<p>307:9, 307:17  <b>briefly</b> [8] - 253:14,  280:3, 297:19,  358:1, 361:4,  362:10, 391:1,  396:18  <b>bring</b> [5] - 270:12,  270:23, 273:10,  275:16, 286:25  <b>bringing</b> [4] - 279:1,  279:12, 288:9,  311:12  <b>brings</b> [2] - 284:10,  340:24  <b>British</b> [7] - 267:6,  267:8, 267:9,  268:17, 268:21,  269:1, 270:7  <b>Brittain</b> [2] - 252:10,  274:7  <b>BRITAIN</b> [1] - 250:14  <b>broader</b> [1] - 264:25  <b>broadly</b> [1] - 264:23  <b>broken</b> [1] - 369:21  <b>brought</b> [5] - 282:23,  285:24, 288:14,  307:12, 307:20  <b>browse</b> [3] - 344:11,  345:16, 346:10  <b>browser</b> [7] - 328:5,  332:5, 332:13,  332:16, 344:19,  344:20  <b>brunt</b> [2] - 362:13,  374:23  <b>building</b> [1] - 277:13  <b>bunch</b> [2] - 327:12,  327:14  <b>burden</b> [1] - 273:18  <b>Bureau</b> [10] - 272:17,  280:15, 316:24,  317:15, 318:18,  319:14, 320:6,  321:23, 323:4, 323:6  <b>bureau</b> [6] - 255:15,  255:20, 264:15,  303:3, 317:18,  317:20  <b>business</b> [6] - 294:12,  294:24, 299:16,  317:10, 348:11,  395:10  <b>BY</b> [10] - 316:18,  324:8, 325:1, 348:5,  355:11, 358:3,  360:6, 361:18,  373:18, 381:12  <b>bypassed</b> [1] - 279:6</p>
---	---	---	--	---

C				
<p><b>cables</b> [1] - 327:15</p> <p><b>cafeteria</b> [1] - 396:6</p> <p><b>campaign</b> [6] - 264:16, 279:18, 283:23, 284:5, 288:4, 302:20</p> <p><b>Campaign</b> [34] - 272:22, 282:10, 282:19, 283:10, 283:18, 283:22, 285:25, 286:2, 286:4, 286:12, 288:1, 288:8, 289:17, 290:15, 292:10, 296:8, 296:10, 296:11, 296:13, 296:22, 301:13, 301:16, 301:17, 301:18, 301:24, 302:1, 305:3, 305:4, 308:23, 309:3, 309:8, 310:15, 312:4, 312:12</p> <p><b>Campaign's</b> [2] - 308:19, 309:7</p> <p><b>candidate</b> [6] - 279:2, 279:13, 284:7, 287:17, 379:6, 384:11</p> <p><b>cannot</b> [4] - 253:20, 253:25, 340:8, 383:13</p> <p><b>capability</b> [3] - 385:12, 385:24, 385:25</p> <p><b>capacity</b> [1] - 267:8</p> <p><b>capturing</b> [1] - 333:16</p> <p><b>care</b> [2] - 295:19, 308:7</p> <p><b>cared</b> [6] - 313:14, 313:22, 314:5, 355:23, 356:2, 356:20</p> <p><b>career</b> [5] - 295:18, 304:6, 317:7, 360:18, 362:19</p> <p><b>carried</b> [2] - 283:9, 289:8</p> <p><b>carry</b> [1] - 293:9</p> <p><b>case</b> [69] - 253:23, 254:3, 255:2, 255:4, 255:24, 256:1, 256:14, 268:16, 271:4, 271:23, 272:10, 272:12, 273:6, 275:7, 275:12, 275:13, 275:17, 275:23, 276:14, 277:9,</p>	<p>277:11, 277:15, 277:20, 278:6, 278:7, 278:17, 281:22, 289:19, 292:13, 294:19, 300:8, 301:3, 302:9, 307:20, 313:17, 314:16, 315:1, 315:7, 315:9, 324:2, 328:18, 328:23, 330:25, 336:6, 337:20, 338:9, 341:6, 345:13, 351:24, 352:5, 352:7, 353:25, 356:24, 359:13, 365:20, 367:22, 368:13, 368:20, 371:8, 371:15, 383:16, 394:4, 394:9, 395:6, 396:7, 396:8</p> <p><b>Case</b> [1] - 252:3</p> <p><b>case-in</b> [1] - 275:7</p> <p><b>case-in-chief</b> [1] - 275:13</p> <p><b>cases</b> [7] - 318:1, 318:3, 318:5, 319:9, 320:12, 331:6, 362:16</p> <p><b>casual</b> [1] - 307:17</p> <p><b>CAT</b> [1] - 319:16</p> <p><b>categories</b> [1] - 338:16</p> <p><b>category</b> [1] - 324:2</p> <p><b>CATHERINE</b> [1] - 250:18</p> <p><b>Catherine</b> [1] - 274:19</p> <p><b>caught</b> [4] - 289:2, 296:3, 296:4, 303:1</p> <p><b>causing</b> [1] - 290:23</p> <p><b>cell</b> [2] - 280:9, 333:5</p> <p><b>censorship</b> [1] - 346:9</p> <p><b>center</b> [2] - 258:12, 375:25</p> <p><b>central</b> [1] - 259:18</p> <p><b>certain</b> [8] - 262:6, 285:9, 333:17, 338:8, 338:9, 379:22, 383:13, 392:3</p> <p><b>certainly</b> [10] - 256:16, 258:21, 258:25, 262:4, 269:8, 269:21, 331:10, 353:5, 362:12, 390:24</p> <p><b>CERTIFICATE</b> [1] - 397:1</p> <p><b>certification</b> [6] -</p>	<p>322:9, 322:12, 322:13, 322:21, 322:23, 323:1</p> <p><b>certifications</b> [5] - 322:6, 322:7, 322:16, 323:3, 348:25</p> <p><b>certified</b> [1] - 323:16</p> <p><b>certify</b> [1] - 397:4</p> <p><b>chain</b> [15] - 331:13, 365:4, 365:6, 365:7, 365:22, 366:11, 366:17, 367:2, 367:6, 367:15, 367:17, 369:11, 370:3, 370:20, 371:20</p> <p><b>chain-of-custody</b> [1] - 365:22</p> <p><b>chair</b> [3] - 315:19, 315:20, 315:21</p> <p><b>chairs</b> [1] - 359:16</p> <p><b>challenged</b> [1] - 338:15</p> <p><b>challenging</b> [1] - 261:6</p> <p><b>chance</b> [1] - 292:1</p> <p><b>change</b> [2] - 318:24, 329:15</p> <p><b>changed</b> [1] - 320:22</p> <p><b>channel</b> [10] - 281:8, 281:11, 285:19, 364:3, 376:6, 376:8, 378:1, 378:15, 383:2, 391:18</p> <p><b>channels</b> [1] - 279:6</p> <p><b>Chantilly</b> [3] - 318:23, 363:22, 366:15</p> <p><b>character</b> [1] - 337:22</p> <p><b>charge</b> [5] - 272:15, 272:23, 280:2, 297:3, 298:4</p> <p><b>charged</b> [7] - 273:4, 279:22, 280:25, 281:4, 292:9, 307:13, 307:22</p> <p><b>charging</b> [1] - 273:9</p> <p><b>chart</b> [1] - 259:12</p> <p><b>check</b> [2] - 265:8, 329:12</p> <p><b>Chicago</b> [10] - 381:21, 388:25, 389:4, 390:2, 390:5, 390:20, 390:25, 391:12, 391:16</p> <p><b>chief</b> [4] - 275:8, 275:13, 317:3, 320:23</p> <p><b>child</b> [1] - 318:4</p> <p><b>choose</b> [4] - 275:16,</p>	<p>278:12, 338:3, 341:11</p> <p><b>chose</b> [1] - 378:22</p> <p><b>chosen</b> [2] - 338:9, 378:24</p> <p><b>Christopher</b> [2] - 269:7, 269:12</p> <p><b>CHRISTOPHER</b> [1] - 250:10</p> <p><b>chronological</b> [1] - 289:24</p> <p><b>CHS</b> [1] - 358:22</p> <p><b>CIA</b> [14] - 258:17, 288:14, 288:18, 288:20, 289:6, 298:16, 298:19, 310:13, 310:20, 310:22, 310:23, 311:2, 311:11</p> <p><b>cite</b> [1] - 356:15</p> <p><b>cited</b> [1] - 269:12</p> <p><b>citizen</b> [10] - 279:14, 279:16, 281:20, 288:3, 290:23, 292:25, 310:25, 351:16, 351:19, 358:6</p> <p><b>citizens</b> [1] - 305:8</p> <p><b>city</b> [1] - 317:19</p> <p><b>civil</b> [2] - 352:5</p> <p><b>claim</b> [3] - 285:13, 306:25, 308:13</p> <p><b>claimed</b> [1] - 285:18</p> <p><b>classes</b> [1] - 322:2</p> <p><b>clear</b> [9] - 306:15, 307:11, 312:22, 314:4, 331:1, 352:11, 353:3, 357:12</p> <p><b>clearance</b> [3] - 294:3, 298:17, 310:1</p> <p><b>click</b> [1] - 336:4</p> <p><b>clicking</b> [1] - 327:24</p> <p><b>client</b> [51] - 256:20, 256:24, 272:20, 279:14, 279:17, 280:14, 281:3, 281:21, 282:7, 282:9, 282:18, 284:10, 287:5, 288:3, 288:6, 288:10, 288:19, 288:21, 289:9, 289:16, 290:12, 296:13, 301:20, 306:1, 306:8, 306:12, 307:2, 307:12, 307:15, 307:21, 307:25, 308:3, 308:6, 311:1,</p>	<p>311:3, 311:4, 311:6, 311:7, 311:9, 311:16, 311:17, 311:18, 311:19, 312:2, 344:18</p> <p><b>clients</b> [22] - 270:18, 272:21, 279:20, 282:9, 283:10, 283:17, 285:23, 285:24, 288:25, 294:9, 296:12, 298:13, 299:23, 301:18, 301:22, 306:10, 309:1, 313:1, 313:24, 314:6, 334:15</p> <p><b>Clinton</b> [38] - 272:22, 282:10, 282:16, 282:19, 283:10, 283:18, 283:21, 285:25, 286:2, 286:4, 286:11, 288:1, 288:8, 289:17, 290:15, 292:10, 296:8, 296:10, 296:11, 296:13, 296:22, 301:13, 301:16, 301:17, 301:18, 301:24, 302:1, 305:3, 305:4, 308:19, 308:22, 309:2, 309:6, 309:8, 310:15, 312:4, 312:11, 312:20</p> <p><b>Clintons</b> [1] - 312:17</p> <p><b>clip</b> [3] - 303:19, 303:20, 303:25</p> <p><b>close</b> [6] - 262:6, 278:14, 321:14, 363:23, 384:7, 389:20</p> <p><b>closed</b> [1] - 359:7</p> <p><b>closer</b> [1] - 262:9</p> <p><b>closest</b> [1] - 294:14</p> <p><b>closing</b> [3] - 276:1, 276:4, 293:6</p> <p><b>Coie</b> [3] - 263:6, 298:9, 298:12</p> <p><b>Coie's</b> [1] - 266:2</p> <p><b>coincidental</b> [1] - 384:1</p> <p><b>coincidentally</b> [1] - 384:6</p> <p><b>collaborate</b> [1] - 362:17</p> <p><b>collaborated</b> [1] - 372:12</p> <p><b>collect</b> [5] - 256:11, 334:22, 365:8,</p>



<p>365:11, 394:1</p> <p><b>collected</b> [2] - 335:21, 365:17</p> <p><b>collecting</b> [1] - 358:11</p> <p><b>collection</b> [3] - 335:23, 342:10, 355:18</p> <p><b>collectors</b> [1] - 334:16</p> <p><b>collects</b> [1] - 254:15</p> <p><b>college</b> [1] - 348:19</p> <p><b>colloquy</b> [1] - 259:18</p> <p><b>colons</b> [1] - 336:18</p> <p><b>Colorado</b> [2] - 317:18, 317:19</p> <p><b>COLUMBIA</b> [1] - 250:1</p> <p><b>column</b> [2] - 338:19, 339:7</p> <p><b>com</b> [10] - 329:19, 329:22, 330:9, 330:10, 330:11, 330:17, 330:21, 331:17</p> <p><b>comfortable</b> [4] - 359:17, 389:6, 389:9, 389:12</p> <p><b>coming</b> [18] - 261:24, 262:5, 280:13, 290:11, 296:1, 296:2, 302:15, 303:1, 341:9, 341:10, 343:15, 346:24, 347:20, 347:22, 347:24, 362:3, 382:11, 393:15</p> <p><b>comma</b> [1] - 337:12</p> <p><b>comma-separated</b> [1] - 337:12</p> <p><b>command</b> [1] - 340:22</p> <p><b>commendations</b> [1] - 323:6</p> <p><b>commercial</b> [4] - 334:9, 334:14, 334:15, 342:18</p> <p><b>committed</b> [3] - 273:1, 280:25, 344:8</p> <p><b>Committee</b> [4] - 287:10, 300:6, 312:11, 312:20</p> <p><b>common</b> [2] - 308:22, 383:15</p> <p><b>commonly</b> [2] - 332:18, 365:17</p> <p><b>communicate</b> [7] - 285:2, 285:14, 325:17, 327:16, 363:3, 379:22, 384:15</p> <p><b>communicating</b> [3] - 352:15, 376:11, 387:25</p>	<p><b>communication</b> [20] - 254:1, 268:20, 281:9, 285:19, 305:12, 350:12, 350:15, 363:4, 376:6, 376:8, 378:1, 378:15, 379:3, 379:11, 380:19, 384:20, 385:20, 390:25, 391:18</p> <p><b>communications</b> [11] - 279:3, 340:6, 351:22, 364:3, 374:8, 374:13, 384:23, 385:2, 385:13, 385:25, 386:2</p> <p><b>community</b> [2] - 354:4, 354:5</p> <p><b>companies</b> [15] - 256:11, 256:13, 284:17, 284:18, 284:22, 286:13, 294:24, 334:8, 334:22, 334:23, 335:17, 354:6, 354:15, 358:8, 358:10</p> <p><b>company</b> [10] - 280:14, 284:16, 290:12, 291:16, 334:13, 341:21, 356:9, 372:6, 376:23, 376:25</p> <p><b>compares</b> [1] - 254:18</p> <p><b>comparing</b> [3] - 372:21, 372:24, 378:8</p> <p><b>comparison</b> [1] - 325:25</p> <p><b>complete</b> [2] - 332:8, 397:6</p> <p><b>completely</b> [3] - 253:22, 332:25, 341:18</p> <p><b>complex</b> [2] - 320:12, 325:7</p> <p><b>complicated</b> [3] - 301:6, 301:7, 348:10</p> <p><b>complications</b> [1] - 289:25</p> <p><b>compromise</b> [1] - 334:19</p> <p><b>computer</b> [52] - 287:11, 299:10, 299:11, 299:12, 317:9, 317:17, 318:3, 318:14, 319:4, 319:17, 320:12, 320:15,</p>	<p>321:18, 322:18, 326:14, 327:19, 328:8, 328:9, 328:18, 328:19, 332:8, 336:12, 339:17, 339:24, 344:19, 345:1, 347:12, 348:19, 349:9, 349:13, 349:14, 349:19, 349:20, 349:23, 349:24, 350:5, 350:21, 350:22, 352:14, 361:9, 361:11, 363:2, 363:3, 363:5, 372:6, 379:9, 379:10, 380:6</p> <p><b>computers</b> [8] - 257:22, 285:1, 326:13, 334:20, 343:3, 346:13, 363:11, 384:3</p> <p><b>conceal</b> [3] - 288:25, 308:24, 309:8</p> <p><b>concealing</b> [1] - 312:3</p> <p><b>concept</b> [7] - 254:11, 255:13, 255:20, 256:6, 257:20, 326:11, 377:5</p> <p><b>concepts</b> [3] - 254:12, 258:12, 324:13</p> <p><b>concern</b> [2] - 259:18, 259:24</p> <p><b>concerned</b> [2] - 279:16, 346:11</p> <p><b>concerning</b> [1] - 364:2</p> <p><b>concerns</b> [2] - 294:7, 311:13</p> <p><b>concert</b> [1] - 283:9</p> <p><b>concerted</b> [1] - 288:25</p> <p><b>conclude</b> [6] - 253:20, 254:6, 385:15, 386:12, 388:2</p> <p><b>concluded</b> [3] - 257:13, 258:2, 259:14</p> <p><b>concluding</b> [1] - 314:9</p> <p><b>conclusion</b> [13] - 258:9, 258:16, 258:18, 259:11, 315:2, 378:13, 379:2, 380:18, 382:20, 386:6, 388:12, 389:10, 389:25</p> <p><b>conclusions</b> [27] - 254:16, 254:21, 255:4, 258:6, 258:11, 259:1, 259:9, 259:22,</p>	<p>260:11, 260:21, 261:11, 262:4, 262:6, 310:10, 336:1, 369:25, 370:1, 378:19, 379:14, 380:14, 382:5, 382:20, 388:16, 388:18, 389:5, 389:13, 391:13</p> <p><b>concur</b> [1] - 391:17</p> <p><b>conduct</b> [4] - 275:8, 285:7, 340:2, 384:11</p> <p><b>conducted</b> [4] - 382:3, 382:18, 383:23, 386:7</p> <p><b>conducting</b> [3] - 284:13, 319:25, 388:4</p> <p><b>conference</b> [1] - 303:23</p> <p><b>confidence</b> [1] - 258:24</p> <p><b>confident</b> [2] - 293:10, 389:15</p> <p><b>confidential</b> [4] - 267:8, 294:21, 298:25, 355:12</p> <p><b>configuration</b> [1] - 374:16</p> <p><b>configure</b> [1] - 346:20</p> <p><b>configured</b> [4] - 374:7, 374:10, 374:12, 376:16</p> <p><b>confirmed</b> [1] - 288:22</p> <p><b>conflicts</b> [1] - 289:24</p> <p><b>Congress</b> [5] - 263:5, 266:3, 289:3, 289:10, 289:13</p> <p><b>connect</b> [6] - 264:1, 332:12, 332:17, 343:6, 347:19, 379:18</p> <p><b>connected</b> [4] - 278:18, 286:3, 332:10, 349:19</p> <p><b>connectible</b> [1] - 379:8</p> <p><b>connecting</b> [5] - 333:5, 346:13, 347:18, 350:21, 379:9</p> <p><b>connection</b> [23] - 268:3, 294:11, 328:2, 332:14, 333:1, 336:5, 339:24, 340:3, 340:15, 343:7, 344:9, 345:11, 345:14, 345:15,</p>	<p>347:8, 350:3, 350:4, 350:7, 350:8, 371:15, 374:25</p> <p><b>connections</b> [5] - 268:5, 294:8, 299:16, 348:1, 384:22</p> <p><b>consequences</b> [1] - 278:21</p> <p><b>consider</b> [4] - 255:20, 283:1, 293:8, 393:21</p> <p><b>considerable</b> [1] - 374:18</p> <p><b>considerably</b> [1] - 377:8</p> <p><b>consideration</b> [2] - 342:1, 395:5</p> <p><b>considered</b> [3] - 287:13, 322:15, 361:15</p> <p><b>consist</b> [1] - 369:20</p> <p><b>consistent</b> [2] - 293:11</p> <p><b>consistently</b> [2] - 347:18, 347:19</p> <p><b>conspiracy</b> [1] - 267:19</p> <p><b>constantly</b> [1] - 347:20</p> <p><b>constitutes</b> [1] - 397:4</p> <p><b>Constitution</b> [2] - 250:23, 397:12</p> <p><b>consult</b> [2] - 319:24, 321:20</p> <p><b>contact</b> [6] - 277:17, 287:12, 304:12, 304:13</p> <p><b>contacts</b> [1] - 294:12</p> <p><b>contained</b> [2] - 375:22, 383:4</p> <p><b>containing</b> [1] - 281:15</p> <p><b>contains</b> [2] - 263:10, 263:11</p> <p><b>contending</b> [1] - 261:7</p> <p><b>content</b> [2] - 264:7, 349:22</p> <p><b>contest</b> [1] - 260:6</p> <p><b>context</b> [5] - 303:2, 351:5, 393:10, 394:23, 395:14</p> <p><b>continue</b> [2] - 277:8, 368:15</p> <p><b>continued</b> [2] - 263:18, 263:19</p> <p><b>continuing</b> [1] - 322:1</p> <p><b>contours</b> [1] - 261:1</p> <p><b>contract</b> [1] - 321:18</p> <p><b>contractors</b> [1] - 320:25</p>
--	--	--	---	--

<p><b>contracts</b> [3] - 354:7, 354:9, 354:10</p> <p><b>contrary</b> [1] - 388:14</p> <p><b>contributed</b> [1] - 259:1</p> <p><b>contrived</b> [1] - 341:18</p> <p><b>control</b> [1] - 290:1</p> <p><b>controlled</b> [1] - 376:8</p> <p><b>controversial</b> [2] - 254:2, 255:2</p> <p><b>conveniently</b> [1] - 384:1</p> <p><b>conversation</b> [4] - 277:20, 292:4, 306:17, 370:15</p> <p><b>conversations</b> [3] - 306:23, 310:22, 357:22</p> <p><b>converted</b> [1] - 337:11</p> <p><b>conveying</b> [1] - 272:20</p> <p><b>convict</b> [2] - 297:13, 309:21</p> <p><b>convinced</b> [1] - 272:25</p> <p><b>Cooper</b> [3] - 283:1, 293:7, 293:9</p> <p><b>COOPER</b> [1] - 250:10</p> <p><b>coordinate</b> [1] - 363:19</p> <p><b>coordinated</b> [3] - 267:3, 267:14, 286:11</p> <p><b>coordination</b> [1] - 366:3</p> <p><b>copy</b> [4] - 333:16, 334:11, 336:8, 336:9</p> <p><b>copyrights</b> [1] - 361:14</p> <p><b>correct</b> [39] - 264:5, 266:7, 335:13, 339:21, 344:1, 348:8, 348:17, 348:18, 348:20, 349:6, 349:15, 349:21, 349:25, 350:16, 350:18, 351:3, 351:11, 351:22, 352:15, 352:22, 353:4, 353:7, 353:8, 354:4, 354:20, 355:25, 356:5, 356:22, 356:23, 357:1, 357:6, 357:9, 357:13, 357:14, 357:16, 371:13, 377:19, 381:8, 390:12</p> <p><b>correspondence</b> [1] - 384:11</p> <p><b>couched</b> [1] - 377:14</p> <p><b>counsel</b> [17] - 253:1,</p>	<p>253:4, 272:19, 274:8, 274:12, 279:12, 279:24, 280:8, 280:24, 282:5, 282:6, 283:21, 287:4, 289:14, 291:4, 301:13, 367:23</p> <p><b>Counsel</b> [4] - 259:2, 274:1, 306:12, 364:21</p> <p><b>Counsel's</b> [1] - 274:3</p> <p><b>COUNSEL'S</b> [1] - 250:14</p> <p><b>counsel's</b> [1] - 279:7</p> <p><b>count</b> [1] - 279:22</p> <p><b>counterintelligence</b> [5] - 362:8, 362:10, 362:12, 362:17, 369:2</p> <p><b>countries</b> [3] - 343:12, 346:9, 362:14</p> <p><b>country</b> [5] - 298:10, 319:18, 346:7, 347:5, 362:3</p> <p><b>couple</b> [7] - 252:17, 253:8, 253:11, 274:23, 277:13, 334:1, 353:14</p> <p><b>course</b> [9] - 258:10, 259:13, 264:24, 290:5, 308:2, 360:18, 362:19, 391:14, 392:24</p> <p><b>court</b> [10] - 267:5, 274:20, 278:8, 278:9, 316:21, 327:23, 351:23, 351:25, 352:6, 371:5</p> <p><b>Court</b> [13] - 250:22, 250:22, 252:19, 252:24, 262:2, 268:15, 269:21, 269:24, 277:19, 293:18, 323:21, 352:10, 397:11</p> <p><b>COURT</b> [95] - 250:1, 252:5, 252:8, 252:13, 253:5, 253:7, 254:9, 255:23, 256:18, 257:7, 257:10, 257:17, 258:13, 258:18, 259:2, 259:15, 260:3, 260:6, 260:25, 261:15, 261:23, 262:11, 262:14, 262:16, 262:19, 262:25, 263:14,</p>	<p>263:25, 264:12, 264:21, 265:6, 265:15, 265:20, 266:4, 266:6, 266:8, 266:22, 267:12, 268:6, 268:22, 269:3, 269:24, 270:3, 270:9, 270:12, 270:22, 270:25, 271:2, 274:11, 274:22, 293:14, 300:25, 315:12, 315:21, 315:24, 316:2, 316:8, 316:12, 316:15, 321:3, 323:17, 323:19, 323:21, 324:20, 324:22, 327:22, 338:12, 354:22, 354:25, 355:2, 355:4, 355:8, 357:25, 358:24, 359:3, 359:11, 359:20, 359:23, 360:3, 361:3, 361:17, 367:11, 373:15, 375:13, 381:10, 383:9, 388:7, 388:10, 394:5, 394:8, 396:3, 396:11, 396:17, 396:20, 397:1</p> <p><b>Court's</b> [3] - 253:2, 261:3, 396:19</p> <p><b>courthouse</b> [1] - 277:12</p> <p><b>Courthouse</b> [2] - 250:23, 397:11</p> <p><b>courtroom</b> [6] - 270:24, 271:11, 271:18, 282:24, 315:23, 396:10</p> <p><b>COURTROOM</b> [4] - 252:2, 270:11, 315:20, 396:16</p> <p><b>cover</b> [1] - 263:8</p> <p><b>coverage</b> [1] - 255:6</p> <p><b>COVID</b> [2] - 271:25, 289:25</p> <p><b>crack</b> [2] - 262:10, 278:8</p> <p><b>create</b> [3] - 257:21, 283:11, 287:1</p> <p><b>created</b> [3] - 257:21, 285:1, 371:21</p> <p><b>credibility</b> [4] - 276:15, 298:20, 300:1, 309:25</p> <p><b>crime</b> [17] - 273:9,</p>	<p>280:25, 282:2, 282:4, 283:6, 317:17, 360:17, 360:21, 361:4, 361:5, 361:7, 361:12, 378:5, 390:15, 392:9, 392:11, 393:1</p> <p><b>crimes</b> [8] - 298:8, 360:22, 361:8, 361:13, 362:1, 362:6, 363:17</p> <p><b>criminal</b> [3] - 272:12, 272:15, 352:8</p> <p><b>Criminal</b> [2] - 250:3, 252:3</p> <p><b>critical</b> [1] - 358:19</p> <p><b>CRM</b> [2] - 376:24, 377:5</p> <p><b>cross</b> [7] - 260:18, 261:16, 266:13, 266:15, 275:9, 275:14, 314:25</p> <p><b>CROSS</b> [1] - 348:4</p> <p><b>cross-examination</b> [2] - 260:18, 266:13</p> <p><b>cross-examine</b> [1] - 266:15</p> <p><b>Crown</b> [1] - 267:7</p> <p><b>CRR</b> [3] - 250:22, 397:3, 397:10</p> <p><b>crystal</b> [1] - 307:11</p> <p><b>curious</b> [1] - 260:19</p> <p><b>current</b> [3] - 320:21, 321:12, 374:7</p> <p><b>curry</b> [1] - 254:23</p> <p><b>Curtis</b> [1] - 391:5</p> <p><b>custody</b> [20] - 365:4, 365:6, 365:7, 365:9, 365:16, 365:22, 366:1, 366:11, 367:2, 367:15, 367:17, 368:4, 368:21, 368:23, 368:24, 369:5, 369:11, 370:3, 370:20, 371:21</p> <p><b>Custody</b> [2] - 368:11, 368:15</p> <p><b>customer</b> [1] - 376:25</p> <p><b>cyber</b> [60] - 260:13, 281:11, 287:9, 291:11, 293:24, 294:17, 298:13, 298:24, 300:16, 301:4, 310:7, 313:16, 313:17, 313:22, 313:23, 314:6, 318:17, 318:19, 318:20,</p>	<p>319:7, 321:24, 321:25, 323:18, 323:23, 341:4, 348:25, 349:2, 350:17, 350:19, 354:4, 354:5, 360:17, 360:21, 361:4, 361:7, 361:12, 361:22, 361:24, 361:25, 362:1, 362:5, 362:16, 362:19, 363:14, 363:17, 365:1, 369:8, 369:9, 372:3, 372:4, 378:3, 378:4, 382:8, 382:9, 382:10, 382:14, 382:16, 385:24, 390:9, 390:14</p> <p><b>Cyber</b> [6] - 317:3, 317:25, 318:1, 319:15, 320:7, 320:23</p> <p><b>CyD</b> [5] - 382:2, 382:12, 382:13, 382:14, 382:16</p>
<b>D</b>				
<p><b>D.C</b> [6] - 278:18, 278:25, 280:6, 283:20, 361:2, 363:24</p> <p><b>damaging</b> [1] - 265:22</p> <p><b>data</b> [173] - 253:19, 254:4, 254:6, 254:7, 254:15, 254:17, 254:18, 255:6, 255:15, 255:16, 255:18, 255:19, 255:22, 256:8, 256:11, 256:12, 256:16, 257:1, 257:5, 257:11, 257:12, 257:21, 258:5, 258:6, 258:14, 258:24, 258:25, 259:3, 259:4, 259:6, 259:23, 259:25, 260:2, 260:4, 260:11, 260:12, 260:22, 261:1, 261:4, 261:7, 261:11, 265:18, 281:8, 281:15, 284:23, 284:24, 284:25, 285:12, 285:22, 286:12, 291:12, 292:8, 294:18, 295:1,</p>				

<p>295:2, 298:25, 299:2, 299:13, 300:17, 300:18, 300:20, 305:10, 310:9, 313:15, 313:16, 314:1, 314:2, 318:8, 318:10, 319:11, 320:2, 321:7, 321:8, 323:23, 335:20, 336:15, 336:17, 338:3, 338:5, 339:4, 340:12, 340:14, 341:24, 342:1, 342:13, 343:21, 350:2, 350:9, 352:25, 353:4, 353:6, 353:7, 353:10, 353:13, 354:8, 354:13, 354:15, 355:18, 355:23, 355:25, 356:1, 356:3, 356:7, 356:8, 356:10, 356:12, 356:14, 356:15, 356:16, 356:17, 356:20, 356:22, 357:8, 357:13, 358:7, 358:11, 362:23, 369:22, 369:25, 370:2, 372:1, 372:8, 372:10, 372:20, 372:22, 372:24, 373:8, 374:24, 375:1, 375:8, 375:15, 375:17, 375:22, 376:1, 376:5, 378:7, 378:8, 378:14, 378:20, 380:12, 380:13, 380:14, 380:17, 381:4, 381:19, 391:11, 391:16, 392:3, 394:1, 394:13, 394:18, 394:22, 394:24, 395:2, 395:5, 395:7, 395:9, 395:15, 395:17, 395:19, 395:21, 395:24 <b>data's</b> [2] - 394:18, 394:19 <b>date</b> [6] - 265:13, 336:17, 338:17, 364:9, 371:6, 375:17 <b>Dated</b> [1] - 397:8 <b>dates</b> [1] - 364:14 <b>Dave</b> [1] - 344:13 <b>DAVID</b> [2] - 251:3,</p>	<p>316:16 <b>David</b> [2] - 316:7, 316:22 <b>day</b> [1] - 377:3 <b>days</b> [3] - 267:10, 281:13, 287:2 <b>DC</b> [3] - 250:15, 250:24, 397:13 <b>deal</b> [4] - 254:11, 260:18, 261:15, 277:22 <b>dealing</b> [1] - 289:24 <b>decade</b> [2] - 293:24, 294:1 <b>decades</b> [1] - 294:2 <b>deceitful</b> [1] - 310:4 <b>December</b> [1] - 289:4 <b>decide</b> [5] - 272:24, 273:13, 295:7, 338:7, 393:11 <b>decided</b> [5] - 252:21, 271:25, 286:25, 328:3, 390:10 <b>deciders</b> [1] - 276:14 <b>decides</b> [1] - 304:25 <b>decisions</b> [1] - 282:24 <b>decoding</b> [1] - 319:3 <b>decrease</b> [1] - 346:23 <b>deeds</b> [1] - 311:24 <b>default</b> [1] - 328:20 <b>defendant</b> [62] - 263:4, 272:14, 273:11, 273:15, 274:12, 275:1, 277:16, 278:25, 279:4, 279:11, 279:16, 279:19, 279:21, 280:1, 280:6, 280:12, 280:18, 280:24, 281:1, 281:6, 281:10, 281:14, 282:8, 283:9, 283:13, 283:16, 283:20, 284:18, 284:19, 285:12, 285:17, 285:21, 286:1, 286:20, 286:24, 287:3, 287:6, 287:8, 287:12, 287:16, 287:20, 287:25, 288:3, 288:5, 288:7, 288:11, 288:13, 288:18, 288:21, 289:2, 289:7, 289:10, 289:12, 289:21, 290:8, 290:14, 290:17, 291:4, 291:6, 292:6, 292:22, 293:12</p>	<p><b>Defendant</b> [2] - 250:7, 250:17 <b>defendant's</b> [11] - 258:3, 280:17, 282:5, 282:18, 283:8, 284:10, 286:6, 290:21, 291:17, 291:21, 292:4 <b>defense</b> [12] - 252:20, 253:3, 253:15, 254:9, 261:15, 274:11, 274:12, 274:13, 275:12, 276:2, 315:1, 334:18 <b>defense's</b> [1] - 259:5 <b>DeFilippis</b> [53] - 250:12, 252:9, 252:10, 252:17, 253:6, 253:14, 255:9, 256:4, 256:22, 257:8, 257:15, 257:19, 258:15, 258:20, 259:8, 261:14, 261:17, 262:1, 262:17, 262:24, 263:3, 263:17, 264:5, 264:14, 264:22, 265:8, 265:17, 267:4, 268:13, 269:2, 269:5, 270:1, 270:4, 270:16, 270:20, 274:8, 359:19, 359:21, 360:6, 361:18, 367:8, 367:12, 373:12, 373:16, 373:18, 375:10, 376:20, 381:5, 381:9, 381:12, 394:5, 394:6, 395:25 <b>DeFilippis)</b>..... ..... [1] - 251:6 <b>definitely</b> [2] - 261:3, 358:12 <b>definitive</b> [1] - 330:23 <b>degree</b> [3] - 317:9, 317:11, 348:21 <b>deliberating</b> [1] - 271:23 <b>deliberations</b> [4] - 272:5, 275:25, 276:8, 278:11 <b>deliver</b> [1] - 285:22 <b>Democratic</b> [9] - 287:10, 300:6, 300:14, 309:4, 312:10, 312:17,</p>	<p>312:20 <b>Democrats</b> [4] - 282:22, 284:3, 292:16, 298:8 <b>demonstrate</b> [1] - 322:17 <b>demonstration</b> [1] - 343:16 <b>demonstrative</b> [2] - 325:11, 335:12 <b>Denver</b> [1] - 317:11 <b>Department</b> [3] - 280:19, 307:5, 307:18 <b>department</b> [1] - 298:8 <b>depended</b> [1] - 298:20 <b>DEPUTY</b> [4] - 252:2, 270:11, 315:20, 396:16 <b>deputy</b> [1] - 369:9 <b>derogatory</b> [1] - 286:14 <b>describe</b> [5] - 253:18, 281:16, 326:1, 367:19, 368:3 <b>described</b> [1] - 263:5 <b>designed</b> [6] - 279:9, 279:10, 337:13, 340:21, 340:23, 342:22 <b>desk</b> [1] - 267:11 <b>despite</b> [1] - 389:23 <b>destroyed</b> [1] - 271:19 <b>detail</b> [1] - 262:8 <b>detailed</b> [2] - 271:8, 275:24 <b>determination</b> [1] - 256:7 <b>determinations</b> [1] - 256:7 <b>determine</b> [6] - 258:13, 346:4, 351:1, 371:11, 382:25, 395:8 <b>determining</b> [1] - 393:6 <b>Detroit</b> [3] - 317:24, 317:25, 318:22 <b>develop</b> [1] - 290:18 <b>developed</b> [1] - 325:13 <b>developments</b> [1] - 321:21 <b>devices</b> [1] - 379:22 <b>devote</b> [1] - 290:24 <b>dial</b> [1] - 333:4 <b>difference</b> [1] - 392:16 <b>different</b> [54] - 254:12, 267:17, 284:14, 296:16, 307:8, 311:14, 314:24,</p>	<p>320:20, 321:7, 321:14, 323:5, 325:21, 326:4, 326:10, 327:14, 329:20, 333:24, 334:1, 334:7, 334:10, 335:16, 336:22, 337:1, 337:25, 338:1, 340:12, 340:19, 343:4, 343:12, 343:20, 344:22, 345:14, 345:15, 346:17, 347:5, 347:9, 350:15, 351:4, 351:9, 352:6, 353:12, 353:13, 353:14, 361:8, 361:25, 362:5, 363:16, 363:18, 389:21, 389:22, 391:21, 392:4, 392:16, 392:17 <b>differing</b> [1] - 389:24 <b>difficult</b> [5] - 256:25, 259:12, 322:16, 326:18, 346:4 <b>difficult-to-obtain</b> [1] - 322:16 <b>DIG</b> [2] - 340:22 <b>digging</b> [2] - 284:6, 340:23 <b>Digital</b> [1] - 320:8 <b>digital</b> [3] - 284:25, 317:13, 322:3 <b>DIRECT</b> [2] - 316:17, 360:5 <b>direct</b> [14] - 268:3, 275:9, 275:14, 279:19, 296:18, 314:25, 349:7, 352:24, 373:19, 374:12, 381:22, 383:7, 384:8, 386:3 <b>directed</b> [1] - 281:23 <b>directly</b> [4] - 343:9, 379:9, 384:15, 385:21 <b>director</b> [1] - 369:9 <b>directory</b> [2] - 328:17, 344:16 <b>dirt</b> [1] - 284:7 <b>dirty</b> [1] - 284:8 <b>disagreed</b> [1] - 379:15 <b>disclose</b> [1] - 272:3 <b>disconnected</b> [1] - 265:23 <b>discuss</b> [4] - 277:9, 359:13, 391:10, 396:12</p>
---	--	---	--	--

<p><b>discussed</b> <sup>[1]</sup> - 352:1</p> <p><b>discusses</b> <sup>[1]</sup> - 261:20</p> <p><b>discussion</b> <sup>[4]</sup> - 253:22, 370:12, 386:10, 396:7</p> <p><b>discussions</b> <sup>[1]</sup> - 391:14</p> <p><b>dispute</b> <sup>[1]</sup> - 270:14</p> <p><b>disregard</b> <sup>[1]</sup> - 276:25</p> <p><b>distinctly</b> <sup>[1]</sup> - 370:14</p> <p><b>distracting</b> <sup>[1]</sup> - 271:15</p> <p><b>distribution</b> <sup>[1]</sup> - 377:1</p> <p><b>DISTRICT</b> <sup>[3]</sup> - 250:1, 250:1, 250:10</p> <p><b>divided</b> <sup>[1]</sup> - 361:19</p> <p><b>division</b> <sup>[20]</sup> - 318:17, 318:19, 361:22, 361:24, 361:25, 362:7, 362:8, 362:10, 362:16, 362:17, 363:14, 365:1, 369:2, 369:8, 369:10, 372:4, 381:21, 382:14, 382:16, 390:9</p> <p><b>divisions</b> <sup>[1]</sup> - 361:19</p> <p><b>DNA</b> <sup>[1]</sup> - 299:13</p> <p><b>DNC</b> <sup>[8]</sup> - 287:14, 287:15, 300:7, 300:11, 309:4, 312:10, 312:16</p> <p><b>DNS</b> <sup>[151]</sup> - 253:19, 253:24, 254:6, 254:14, 254:18, 255:16, 256:11, 257:21, 260:22, 261:1, 284:24, 284:25, 285:12, 287:14, 291:12, 294:18, 295:1, 295:2, 298:25, 299:2, 300:22, 318:8, 318:10, 319:11, 320:2, 321:8, 321:9, 323:18, 323:23, 324:13, 325:2, 325:4, 325:11, 325:24, 326:1, 326:10, 326:24, 327:1, 328:16, 328:20, 328:23, 328:25, 329:4, 329:9, 329:12, 329:13, 329:15, 330:2, 330:3, 330:7, 331:18, 331:21, 332:7, 332:11, 333:13, 333:15,</p>	<p>333:16, 333:25, 334:2, 334:5, 334:6, 334:7, 334:9, 334:11, 334:15, 334:22, 335:4, 335:5, 335:7, 335:8, 335:10, 335:11, 335:16, 335:17, 335:19, 335:20, 335:23, 335:24, 336:6, 336:7, 336:8, 336:15, 336:24, 337:4, 339:3, 339:9, 339:14, 339:15, 339:17, 339:22, 340:2, 340:4, 340:5, 340:8, 341:14, 341:15, 341:16, 341:17, 341:19, 341:20, 341:24, 342:1, 342:2, 342:3, 342:4, 342:6, 342:9, 342:16, 342:18, 348:10, 348:14, 349:1, 349:5, 349:8, 349:16, 349:17, 350:2, 350:7, 350:8, 350:9, 352:25, 353:4, 353:7, 353:9, 353:12, 353:14, 354:1, 354:8, 354:12, 354:15, 355:18, 356:4, 356:20, 357:8, 357:13, 358:6, 358:7, 358:8, 358:11, 362:23, 362:24, 363:1, 363:2, 363:6, 363:9, 375:22</p> <p><b>document</b> <sup>[13]</sup> - 270:6, 366:22, 373:4, 373:25, 375:6, 376:19, 376:21, 380:23, 381:3, 382:1, 383:10, 383:13, 391:11</p> <p><b>documentary</b> <sup>[1]</sup> - 357:10</p> <p><b>documents</b> <sup>[7]</sup> - 262:22, 275:21, 290:5, 290:7, 364:12, 383:5, 383:11</p> <p><b>DOJ</b> <sup>[1]</sup> - 307:7</p> <p><b>dollars</b> <sup>[5]</sup> - 284:19, 294:23, 294:25, 299:2, 354:8</p> <p><b>domain</b> <sup>[32]</sup> - 254:16, 330:9, 331:15,</p>	<p>331:17, 331:18, 337:23, 338:25, 339:18, 340:24, 341:1, 341:5, 341:7, 341:10, 349:25, 363:9, 369:23, 375:18, 376:8, 376:10, 379:5, 379:6, 379:7, 384:13, 384:24, 385:21, 385:22, 386:3, 387:5, 387:13</p> <p><b>Domain</b> <sup>[4]</sup> - 284:24, 325:2, 325:11, 362:23</p> <p><b>domains</b> <sup>[9]</sup> - 328:17, 386:13, 386:15, 386:16, 386:17, 386:19, 386:20, 386:23, 386:24</p> <p><b>domestic</b> <sup>[1]</sup> - 293:1</p> <p><b>Donald</b> <sup>[6]</sup> - 282:16, 284:7, 292:17, 294:8, 294:12, 299:7</p> <p><b>done</b> <sup>[11]</sup> - 332:11, 345:12, 360:19, 362:19, 365:17, 380:5, 381:18, 386:8, 390:23, 391:8, 394:20</p> <p><b>door</b> <sup>[4]</sup> - 259:23, 313:3, 315:22, 379:25</p> <p><b>dossier</b> <sup>[20]</sup> - 263:12, 263:14, 263:15, 263:16, 263:20, 263:22, 263:25, 264:1, 264:4, 264:8, 265:4, 265:5, 265:6, 266:21, 267:2, 267:19, 268:10, 268:16, 269:19</p> <p><b>dossier's</b> <sup>[2]</sup> - 263:18, 264:25</p> <p><b>dots</b> <sup>[1]</sup> - 264:2</p> <p><b>doubled</b> <sup>[1]</sup> - 288:12</p> <p><b>doubt</b> <sup>[9]</sup> - 273:1, 273:4, 273:14, 273:18, 273:21, 280:1, 297:14, 308:8, 308:14</p> <p><b>down</b> <sup>[21]</sup> - 263:3, 271:17, 278:9, 288:12, 292:3, 292:11, 296:22, 296:25, 299:1, 305:4, 308:16, 321:4, 326:8, 327:22, 343:14, 368:9, 368:15,</p>	<p>371:6, 386:17, 386:22, 396:11</p> <p><b>dozen</b> <sup>[2]</sup> - 321:14, 322:7</p> <p><b>Dr</b> <sup>[1]</sup> - 252:20</p> <p><b>draft</b> <sup>[1]</sup> - 381:19</p> <p><b>drafted</b> <sup>[6]</sup> - 256:8, 381:4, 383:1, 388:23, 388:25, 389:8</p> <p><b>drafting</b> <sup>[2]</sup> - 263:18, 389:25</p> <p><b>drastically</b> <sup>[1]</sup> - 389:24</p> <p><b>draw</b> <sup>[7]</sup> - 254:20, 260:21, 261:11, 262:6, 336:1, 376:12, 388:12</p> <p><b>drawn</b> <sup>[5]</sup> - 254:17, 382:5, 382:20, 382:21</p> <p><b>drew</b> <sup>[4]</sup> - 255:4, 258:11, 259:22, 388:16</p> <p><b>drives</b> <sup>[16]</sup> - 281:15, 281:17, 292:5, 292:7, 292:9, 320:13, 366:1, 366:14, 366:16, 370:18, 371:12, 375:22, 381:21, 382:1, 390:8</p> <p><b>drop</b> <sup>[1]</sup> - 270:21</p> <p><b>drove</b> <sup>[3]</sup> - 366:15, 366:18</p> <p><b>dupe</b> <sup>[1]</sup> - 310:8</p> <p><b>Durham</b> <sup>[2]</sup> - 252:14, 274:9</p> <p><b>DURHAM</b> <sup>[1]</sup> - 252:16</p> <p><b>during</b> <sup>[16]</sup> - 260:23, 271:19, 272:11, 275:18, 275:25, 276:11, 277:24, 288:20, 289:7, 300:22, 313:8, 340:15, 357:21, 358:7, 370:12</p> <p><b>duties</b> <sup>[1]</sup> - 293:9</p> <p><b>duty</b> <sup>[2]</sup> - 273:21, 276:12</p> <p><b>dwelt</b> <sup>[1]</sup> - 257:2</p>	<p><b>ECOU</b> <sup>[6]</sup> - 382:2, 382:7, 382:8, 385:5, 385:8, 385:16</p> <p><b>EDGAR</b> <sup>[1]</sup> - 250:13</p> <p><b>education</b> <sup>[3]</sup> - 322:1, 348:16, 349:3</p> <p><b>educational</b> <sup>[1]</sup> - 317:8</p> <p><b>effect</b> <sup>[1]</sup> - 253:18</p> <p><b>effectively</b> <sup>[1]</sup> - 296:21</p> <p><b>efficient</b> <sup>[1]</sup> - 276:10</p> <p><b>effort</b> <sup>[8]</sup> - 267:15, 268:24, 269:23, 285:2, 288:25, 296:13, 311:5, 372:13</p> <p><b>efforts</b> <sup>[1]</sup> - 283:23</p> <p><b>Egypt</b> <sup>[1]</sup> - 343:15</p> <p><b>either</b> <sup>[11]</sup> - 265:3, 265:10, 269:6, 282:17, 303:10, 308:6, 309:12, 337:14, 385:11, 388:5, 396:18</p> <p><b>election</b> <sup>[10]</sup> - 263:20, 279:2, 279:10, 283:12, 283:19, 285:24, 287:18, 289:15, 300:4, 310:15</p> <p><b>electronic</b> <sup>[1]</sup> - 344:6</p> <p><b>element</b> <sup>[4]</sup> - 273:4, 273:14, 273:20, 273:23</p> <p><b>elemental</b> <sup>[1]</sup> - 349:9</p> <p><b>elements</b> <sup>[1]</sup> - 273:5</p> <p><b>elephant</b> <sup>[1]</sup> - 282:13</p> <p><b>Elias</b> <sup>[5]</sup> - 264:23, 266:22, 268:8, 301:11, 301:12</p> <p><b>Elias's</b> <sup>[2]</sup> - 264:23, 266:23</p> <p><b>elicit</b> <sup>[10]</sup> - 259:13, 259:20, 259:21, 260:2, 262:21, 263:17, 263:21, 264:11, 264:23, 265:3</p> <p><b>email</b> <sup>[31]</sup> - 253:25, 282:1, 285:14, 285:17, 290:24, 302:19, 326:16, 341:7, 341:8, 349:14, 349:16, 349:17, 374:7, 374:8, 374:19, 376:17, 377:10, 379:18, 379:19, 379:21, 386:19, 386:21, 386:22,</p>
<b>E</b>				
<p><b>easier</b> <sup>[5]</sup> - 326:6, 326:19, 337:14, 347:17, 347:21</p> <p><b>easily</b> <sup>[1]</sup> - 379:8</p> <p><b>easy</b> <sup>[3]</sup> - 336:12, 336:13, 338:22</p> <p><b>eat</b> <sup>[1]</sup> - 396:6</p>				

<p>386:24, 387:4, 387:7, 387:10, 387:14, 387:15, 387:18</p> <p><b>email-related</b> [1] - 386:22</p> <p><b>email.com</b> [5] - 376:2, 376:10, 376:18, 376:23, 384:14</p> <p><b>email.com'</b> [1] - 384:13</p> <p><b>emails</b> [11] - 282:1, 285:3, 290:16, 290:20, 340:6, 349:22, 364:12, 377:1, 377:2, 377:16, 391:5</p> <p><b>employee</b> [7] - 288:18, 291:18, 291:20, 298:20, 310:23, 311:2, 366:7</p> <p><b>employees</b> [3] - 291:15, 320:25, 389:2</p> <p><b>enabled</b> [1] - 298:18</p> <p><b>enables</b> [1] - 349:3</p> <p><b>encroaches</b> [1] - 261:3</p> <p><b>encryption</b> [1] - 345:25</p> <p><b>end</b> [17] - 271:9, 271:20, 272:4, 272:24, 273:6, 273:12, 274:20, 279:9, 280:15, 314:4, 327:8, 343:13, 345:22, 364:8, 371:7, 371:10, 383:19</p> <p><b>ends</b> [3] - 279:20, 292:15, 330:9</p> <p><b>enemies</b> [1] - 293:1</p> <p><b>enforcement</b> [6] - 292:19, 292:25, 352:2, 352:8, 352:13, 352:16</p> <p><b>engineering</b> [2] - 317:12, 320:15</p> <p><b>enter</b> [3] - 252:10, 332:22, 332:23</p> <p><b>enters</b> [1] - 270:24</p> <p><b>entire</b> [1] - 263:15</p> <p><b>entirely</b> [2] - 271:16, 340:4</p> <p><b>entitled</b> [1] - 333:13</p> <p><b>entries</b> [2] - 301:24, 301:25</p> <p><b>entry</b> [1] - 337:5</p> <p><b>envious</b> [1] - 348:11</p> <p><b>equals</b> [1] - 332:5</p>	<p><b>equities</b> [1] - 372:3</p> <p><b>equity</b> [4] - 378:3, 382:2, 382:12, 390:14</p> <p><b>equivalent</b> [1] - 377:12</p> <p><b>Eric</b> [4] - 302:7, 369:6, 369:7, 369:8</p> <p><b>error</b> [3] - 379:20, 380:6</p> <p><b>especially</b> [1] - 304:2</p> <p><b>ESQ</b> [8] - 250:12, 250:13, 250:13, 250:14, 250:17, 250:17, 250:18, 250:18</p> <p><b>essential</b> [1] - 314:13</p> <p><b>essentially</b> [7] - 264:18, 312:19, 325:14, 365:10, 373:7, 387:14, 392:14</p> <p><b>establish</b> [3] - 258:25, 268:3, 340:14</p> <p><b>esteemed</b> [1] - 302:12</p> <p><b>Eurasia</b> [1] - 382:11</p> <p><b>Eurasian</b> [1] - 382:9</p> <p><b>evaluate</b> [3] - 255:14, 310:9, 358:17</p> <p><b>evaluating</b> [1] - 255:19</p> <p><b>eve</b> [2] - 279:2, 283:12</p> <p><b>evening</b> [2] - 252:20, 271:3</p> <p><b>event</b> [1] - 391:1</p> <p><b>eventually</b> [1] - 333:5</p> <p><b>evidence</b> [100] - 258:1, 258:5, 261:19, 263:7, 265:4, 265:22, 266:17, 266:19, 266:20, 267:16, 267:21, 268:1, 268:23, 269:8, 272:25, 273:8, 273:11, 275:2, 275:4, 275:6, 275:18, 275:20, 275:22, 276:4, 276:5, 276:15, 276:19, 277:5, 278:17, 279:5, 279:15, 279:25, 280:3, 280:5, 280:23, 281:6, 281:14, 282:8, 282:12, 283:2, 283:7, 284:15, 284:21, 285:5, 285:11, 285:16, 285:21, 286:7, 286:10, 286:19, 287:6, 287:25,</p>	<p>289:12, 289:20, 289:23, 290:1, 290:3, 290:4, 290:5, 291:25, 292:9, 292:21, 292:24, 293:8, 296:7, 296:20, 297:2, 297:3, 297:5, 297:20, 299:8, 299:15, 300:19, 304:4, 305:11, 306:22, 308:17, 312:7, 315:3, 315:10, 357:10, 358:7, 365:8, 365:9, 365:12, 365:15, 365:16, 365:17, 366:1, 366:8, 367:3, 367:4, 367:21, 368:4, 371:8, 380:8</p> <p><b>evidentiary</b> [2] - 253:11, 264:12</p> <p><b>exact</b> [6] - 296:9, 296:22, 307:2, 307:13, 307:21, 312:7</p> <p><b>exactly</b> [7] - 263:1, 270:18, 296:5, 303:3, 306:23, 342:16, 365:9</p> <p><b>exaggerated</b> [1] - 331:1</p> <p><b>examination</b> [9] - 260:18, 266:13, 275:9, 275:10, 275:11, 275:14, 275:15, 349:7, 352:24</p> <p><b>EXAMINATION</b> [4] - 316:17, 348:4, 358:2, 360:5</p> <p><b>examine</b> [1] - 266:15</p> <p><b>examining</b> [3] - 318:7, 318:9, 320:12</p> <p><b>example</b> [14] - 253:23, 256:9, 329:9, 329:18, 337:18, 338:10, 341:19, 347:11, 349:13, 351:2, 352:5, 363:4, 379:16, 392:20</p> <p><b>examples</b> [1] - 312:18</p> <p><b>exceed</b> [2] - 385:6, 385:16</p> <p><b>exceeds</b> [1] - 385:17</p> <p><b>Excel</b> [2] - 337:16, 339:6</p> <p><b>excellence</b> [1] - 323:7</p> <p><b>exchanged</b> [1] - 349:23</p>	<p><b>exclusion</b> [1] - 374:14</p> <p><b>excused</b> [1] - 359:12</p> <p><b>execute</b> [1] - 283:16</p> <p><b>executive</b> [7] - 279:18, 282:10, 283:10, 284:15, 294:16, 298:23, 369:8</p> <p><b>Exhibit</b> [12] - 324:15, 324:16, 366:21, 367:9, 373:1, 373:3, 373:13, 375:4, 375:11, 376:13, 380:22, 381:6</p> <p><b>exhibits</b> [1] - 275:21</p> <p><b>existence</b> [4] - 254:7, 310:16, 311:6, 339:22</p> <p><b>exit</b> [10] - 315:22, 343:17, 343:20, 343:25, 346:17, 346:18, 347:13, 347:21, 347:24, 374:10</p> <p><b>exits</b> [2] - 315:23, 396:10</p> <p><b>expand</b> [1] - 272:1</p> <p><b>expansive</b> [2] - 392:6</p> <p><b>expect</b> [9] - 253:23, 255:12, 256:4, 256:5, 257:2, 277:23, 283:3, 289:1, 302:8</p> <p><b>expectation</b> [1] - 286:22</p> <p><b>expecting</b> [1] - 311:19</p> <p><b>expeditious</b> [1] - 387:4</p> <p><b>experience</b> [3] - 300:3, 348:17, 393:2</p> <p><b>expert</b> [20] - 253:13, 259:21, 259:25, 260:20, 291:11, 298:24, 299:5, 301:4, 301:6, 322:9, 323:16, 323:22, 324:3, 324:6, 348:13, 348:16, 350:17, 354:1, 388:9</p> <p><b>expertise</b> [2] - 324:5, 362:13</p> <p><b>experts</b> [11] - 260:13, 294:17, 294:18, 300:16, 310:7, 313:16, 313:18, 313:22, 313:23, 314:6, 350:19</p> <p><b>explain</b> [15] - 254:5, 255:13, 255:14, 271:6, 291:12, 291:21, 293:7,</p>	<p>301:7, 304:18, 333:14, 342:24, 349:4, 379:15, 391:24, 392:5</p> <p><b>explained</b> [2] - 272:12, 283:1</p> <p><b>explaining</b> [3] - 361:3, 369:24, 369:25</p> <p><b>explanation</b> [1] - 374:15</p> <p><b>exploitation</b> [1] - 318:4</p> <p><b>export</b> [3] - 338:5, 338:7, 339:4</p> <p><b>express</b> [1] - 387:1</p> <p><b>extent</b> [10] - 268:8, 359:1, 359:3, 366:4, 389:5, 389:12, 391:2, 395:3, 395:9, 395:16</p> <p><b>extra</b> [1] - 305:10</p> <p><b>extraordinary</b> [2] - 315:7, 315:8</p> <p><b>extremely</b> [1] - 257:5</p> <p><b>eyes</b> [1] - 300:1</p> <p><b>eyesight</b> [1] - 338:15</p>
<b>F</b>				
<p><b>fabricated</b> [5] - 258:8, 258:14, 259:11, 259:25, 261:2</p> <p><b>fabrication</b> [2] - 261:21, 262:9</p> <p><b>face</b> [1] - 281:1</p> <p><b>Facebook</b> [3] - 334:3, 337:4, 339:25</p> <p><b>facilitate</b> [1] - 319:2</p> <p><b>facilitated</b> [1] - 363:18</p> <p><b>fact</b> [25] - 256:14, 257:23, 259:11, 262:6, 263:22, 264:3, 265:17, 267:6, 269:9, 272:21, 301:5, 336:19, 340:6, 349:14, 349:16, 350:2, 350:12, 350:14, 350:17, 350:19, 352:14, 355:14, 370:16, 389:23, 393:14</p> <p><b>factors</b> [2] - 271:25, 389:14</p> <p><b>facts</b> [11] - 253:22, 254:3, 265:23, 276:14, 293:12, 324:1, 384:19, 392:3, 392:8, 392:12, 392:25</p>				

<p><b>factual</b> [1] - 268:14</p> <p><b>fair</b> [16] - 261:12, 276:9, 314:14, 314:15, 318:6, 319:6, 319:10, 320:2, 331:3, 335:22, 342:10, 349:8, 350:23, 353:9, 354:18, 390:9</p> <p><b>fairly</b> [3] - 325:15, 385:21, 388:4</p> <p><b>false</b> [21] - 256:21, 261:7, 272:16, 279:22, 279:24, 281:4, 283:5, 288:7, 288:9, 291:4, 297:9, 297:10, 297:23, 297:24, 308:10, 308:11, 308:15, 309:19, 314:18, 314:19</p> <p><b>falsified</b> [1] - 259:4</p> <p><b>familiar</b> [5] - 263:10, 332:21, 362:22, 365:3, 377:9</p> <p><b>family</b> [2] - 285:10, 298:6</p> <p><b>far</b> [9] - 272:7, 331:5, 354:19, 355:4, 355:5, 363:23, 375:16, 388:20</p> <p><b>farsight</b> [1] - 334:23</p> <p><b>fault</b> [1] - 277:6</p> <p><b>FBI</b> [170] - 255:3, 255:25, 256:10, 256:15, 256:17, 256:25, 257:12, 258:1, 258:13, 259:14, 259:22, 260:8, 260:12, 263:13, 263:23, 264:3, 265:3, 267:10, 268:12, 268:17, 268:18, 268:19, 272:19, 278:19, 278:20, 278:23, 279:1, 279:4, 279:7, 279:10, 279:11, 279:19, 279:23, 279:25, 280:11, 280:24, 281:1, 281:3, 281:22, 281:23, 282:20, 283:5, 283:13, 283:14, 284:9, 286:25, 287:1, 287:3, 287:13, 287:21, 288:6, 289:5, 289:11,</p>	<p>289:18, 289:21, 290:20, 291:3, 291:11, 292:6, 292:14, 292:23, 293:1, 293:19, 293:20, 293:21, 293:25, 294:1, 294:4, 294:20, 294:21, 295:19, 295:20, 295:24, 295:25, 296:2, 296:4, 296:9, 296:16, 296:17, 296:20, 296:21, 296:24, 296:25, 297:8, 297:22, 298:15, 298:19, 298:25, 300:12, 302:14, 302:25, 303:2, 303:9, 304:22, 304:25, 305:6, 305:8, 305:17, 307:2, 307:3, 307:6, 307:12, 307:14, 307:18, 307:24, 308:4, 308:17, 308:18, 308:25, 309:2, 309:3, 309:4, 309:6, 309:13, 309:15, 310:8, 310:20, 311:12, 311:21, 312:14, 312:24, 313:5, 317:4, 317:5, 317:7, 317:23, 318:19, 351:14, 353:3, 353:6, 354:17, 354:20, 355:13, 356:14, 357:4, 358:5, 358:13, 360:12, 360:18, 360:20, 360:24, 361:1, 361:7, 361:19, 362:7, 363:12, 363:13, 363:23, 364:2, 364:18, 364:19, 364:20, 365:6, 365:18, 366:7, 366:9, 366:14, 367:23, 369:1, 389:1, 390:2, 390:17, 390:20, 391:20, 393:2, 393:4, 393:20</p> <p><b>FBI's</b> [11] - 256:2, 258:9, 258:11, 259:9, 259:13, 279:7, 280:7, 282:5, 282:6, 289:14,</p>	<p>350:19</p> <p><b>February</b> [2] - 310:14, 343:22</p> <p><b>federal</b> [3] - 293:25, 294:25, 300:2</p> <p><b>Federal</b> [2] - 272:17, 316:24</p> <p><b>feelings</b> [2] - 282:14, 282:16</p> <p><b>fellow</b> [1] - 277:10</p> <p><b>felt</b> [5] - 378:18, 378:21, 378:24, 389:8, 389:22</p> <p><b>few</b> [12] - 262:19, 271:5, 276:7, 300:4, 312:18, 323:5, 326:18, 334:21, 337:1, 339:13, 348:24, 353:14</p> <p><b>fiberoptic</b> [1] - 327:15</p> <p><b>fictitious</b> [1] - 272:16</p> <p><b>field</b> [9] - 317:25, 319:22, 321:15, 337:24, 338:7, 338:22, 338:25, 363:16, 382:10</p> <p><b>fields</b> [9] - 322:19, 337:19, 337:20, 337:25, 338:3, 338:8, 338:9, 339:8, 375:25</p> <p><b>Fifth</b> [1] - 252:22</p> <p><b>figure</b> [10] - 277:22, 299:20, 305:11, 320:16, 338:23, 347:21, 350:21, 351:3, 352:14, 356:3</p> <p><b>file</b> [2] - 312:14, 337:15</p> <p><b>filter</b> [1] - 341:11</p> <p><b>filters</b> [1] - 341:3</p> <p><b>final</b> [3] - 259:1, 272:4, 276:7</p> <p><b>finally</b> [7] - 265:2, 289:1, 291:24, 331:20, 356:24, 384:9, 384:10</p> <p><b>financially</b> [1] - 362:1</p> <p><b>findings</b> [2] - 321:21, 374:3</p> <p><b>Findings</b> [1] - 373:24</p> <p><b>fine</b> [1] - 253:5</p> <p><b>finish</b> [1] - 309:18</p> <p><b>FiOS</b> [4] - 327:21, 328:1, 329:9, 330:2</p> <p><b>fire</b> [1] - 305:16</p> <p><b>firewalls</b> [1] - 341:3</p> <p><b>firm</b> [12] - 264:10, 264:11, 264:16, 264:17, 280:7,</p>	<p>283:21, 283:24, 284:19, 286:3, 291:21, 298:10, 301:12</p> <p><b>firm's</b> [1] - 291:22</p> <p><b>firms</b> [1] - 298:10</p> <p><b>first</b> [47] - 253:15, 255:11, 258:5, 263:4, 266:14, 269:14, 271:13, 274:24, 283:18, 286:9, 287:8, 289:22, 292:1, 297:7, 298:2, 303:15, 305:4, 305:20, 308:8, 308:17, 316:4, 317:24, 325:13, 328:9, 329:16, 340:3, 344:10, 344:13, 345:1, 345:3, 365:11, 367:20, 372:7, 375:6, 375:14, 377:22, 377:24, 378:2, 378:18, 379:13, 381:24, 382:7, 383:19, 384:9, 386:4, 386:11</p> <p><b>fish</b> [1] - 267:18</p> <p><b>five</b> [2] - 288:12, 394:7</p> <p><b>flag</b> [2] - 252:24, 255:10</p> <p><b>flagged</b> [1] - 253:15</p> <p><b>flat</b> [1] - 296:3</p> <p><b>flat-footed</b> [1] - 296:3</p> <p><b>focus</b> [1] - 377:17</p> <p><b>focusing</b> [2] - 297:6, 314:16</p> <p><b>folks</b> [3] - 257:4, 277:14, 277:16</p> <p><b>follow</b> [4] - 271:7, 275:14, 357:18, 369:16</p> <p><b>follow-up</b> [1] - 357:18</p> <p><b>followed</b> [1] - 275:9</p> <p><b>following</b> [4] - 332:19, 382:5, 382:21, 386:8</p> <p><b>follows</b> [1] - 265:24</p> <p><b>footed</b> [1] - 296:3</p> <p><b>footing</b> [1] - 288:4</p> <p><b>footnote</b> [1] - 376:21</p> <p><b>FOR</b> [1] - 250:1</p> <p><b>force</b> [2] - 346:21, 351:21</p> <p><b>Force</b> [2] - 317:25, 318:2</p> <p><b>foregoing</b> [1] - 397:4</p> <p><b>foreign</b> [6] - 267:1, 269:25, 279:3,</p>	<p>293:1, 362:3, 362:14</p> <p><b>forensics</b> [5] - 317:13, 320:10, 320:12, 321:1, 322:3</p> <p><b>Forensics</b> [2] - 320:8, 334:24</p> <p><b>form</b> [11] - 264:4, 367:17, 368:5, 368:6, 370:4, 370:20, 370:21, 370:23, 370:24, 371:2, 392:15</p> <p><b>formal</b> [1] - 273:9</p> <p><b>format</b> [10] - 326:11, 336:9, 336:10, 336:11, 336:14, 337:9, 337:11, 337:13, 338:6, 339:5</p> <p><b>formats</b> [1] - 337:19</p> <p><b>former</b> [3] - 291:21, 310:23, 311:2</p> <p><b>forth</b> [5] - 270:7, 289:25, 363:11, 368:18, 379:14</p> <p><b>foundation</b> [2] - 344:7, 388:8</p> <p><b>founded</b> [1] - 354:15</p> <p><b>four</b> [8] - 272:1, 272:2, 272:7, 274:23, 297:6, 297:22, 319:15</p> <p><b>fourth</b> [2] - 276:1, 297:11</p> <p><b>Francisco</b> [1] - 361:1</p> <p><b>fraudulent</b> [1] - 272:16</p> <p><b>freaking</b> [1] - 302:20</p> <p><b>free</b> [6] - 271:17, 316:12, 353:18, 359:15, 359:24, 396:5</p> <p><b>freedom</b> [1] - 346:8</p> <p><b>frequent</b> [1] - 287:12</p> <p><b>frequently</b> [3] - 319:12, 320:1, 348:15</p> <p><b>friend</b> [1] - 280:7</p> <p><b>friendly</b> [1] - 337:10</p> <p><b>friends</b> [1] - 389:20</p> <p><b>frontier</b> [1] - 344:7</p> <p><b>frustrated</b> [2] - 302:15, 370:17</p> <p><b>full</b> [11] - 300:13, 311:21, 392:2, 392:9, 392:22, 393:14, 393:19, 393:23, 393:25, 394:11, 397:5</p> <p><b>fullest</b> [1] - 272:10</p> <p><b>fully</b> [1] - 393:21</p> <p><b>furthermore</b> [1] -</p>
---	---	--	---	---

<p>383:21 <b>Fusion</b> <sup>[13]</sup> - 264:10, 264:24, 268:20, 269:9, 269:18, 269:23, 283:24, 284:4, 286:3, 286:12, 286:17, 290:18, 291:18 <b>Fusion's</b> <sup>[1]</sup> - 291:19 <b>FYI</b> <sup>[1]</sup> - 311:20</p>	<p><b>glitch</b> <sup>[1]</sup> - 327:7 <b>global</b> <sup>[1]</sup> - 322:11 <b>goal</b> <sup>[1]</sup> - 255:5 <b>gobbledygook</b> <sup>[1]</sup> - 301:4 <b>golden</b> <sup>[1]</sup> - 285:22 <b>Google</b> <sup>[12]</sup> - 327:11, 328:19, 329:3, 331:20, 331:22, 332:17, 332:21, 333:1, 334:2, 335:5, 335:15, 343:15 <b>Google.com</b> <sup>[17]</sup> - 325:5, 326:20, 328:3, 328:6, 328:10, 328:13, 329:1, 330:4, 330:18, 330:22, 331:7, 332:5, 332:9, 332:10, 332:19, 332:23, 335:7 <b>Google.com's</b> <sup>[2]</sup> - 329:10, 330:24 <b>Government</b> <sup>[10]</sup> - 366:21, 367:9, 372:25, 373:3, 373:13, 375:4, 375:11, 376:13, 380:21, 381:6 <b>government</b> <sup>[51]</sup> - 252:11, 252:18, 259:20, 261:5, 262:18, 266:8, 268:23, 273:3, 273:13, 273:19, 273:20, 273:23, 274:1, 274:24, 275:7, 275:11, 275:16, 276:2, 276:3, 288:13, 293:5, 294:20, 294:25, 297:13, 298:16, 298:23, 299:1, 299:3, 300:2, 301:6, 306:21, 308:12, 309:20, 314:12, 314:14, 315:3, 320:25, 346:9, 353:9, 353:10, 354:7, 355:19, 356:21, 359:21, 362:4, 367:8, 373:12, 375:11, 381:5, 384:12, 395:11 <b>government's</b> <sup>[6]</sup> - 275:12, 279:25, 297:1, 312:3, 315:1, 316:3 <b>Government's</b> <sup>[3]</sup> -</p>	<p>324:15, 324:16, 324:19 <b>GPS</b> <sup>[12]</sup> - 264:10, 264:24, 268:20, 269:18, 269:23, 283:24, 284:4, 286:3, 286:12, 286:17, 290:18, 291:18 <b>GPS's</b> <sup>[1]</sup> - 269:9 <b>grand</b> <sup>[1]</sup> - 272:13 <b>granularity</b> <sup>[1]</sup> - 265:10 <b>graphic</b> <sup>[1]</sup> - 344:5 <b>great</b> <sup>[6]</sup> - 327:11, 327:18, 330:5, 333:23, 336:19, 339:24 <b>green</b> <sup>[1]</sup> - 371:3 <b>ground</b> <sup>[1]</sup> - 271:6 <b>group</b> <sup>[6]</sup> - 320:10, 320:11, 321:1, 322:12, 329:14, 343:1 <b>guard</b> <sup>[1]</sup> - 303:1 <b>guess</b> <sup>[6]</sup> - 255:2, 261:19, 262:20, 322:12, 324:25, 387:10 <b>guilt</b> <sup>[1]</sup> - 273:11 <b>guilty</b> <sup>[7]</sup> - 272:23, 273:17, 273:22, 273:24, 280:1, 289:18, 293:12 <b>guy</b> <sup>[5]</sup> - 304:6, 311:7, 311:17, 311:22, 314:3</p>	<p>365:12, 394:16 <b>handed</b> <sup>[1]</sup> - 368:12 <b>handled</b> <sup>[2]</sup> - 369:17, 370:7 <b>handles</b> <sup>[1]</sup> - 321:6 <b>handling</b> <sup>[1]</sup> - 307:7 <b>hands</b> <sup>[1]</sup> - 368:16 <b>handwritten</b> <sup>[1]</sup> - 292:2 <b>happy</b> <sup>[1]</sup> - 270:2 <b>hard</b> <sup>[9]</sup> - 306:19, 320:13, 325:21, 338:21, 338:25, 342:15, 342:17, 347:25 <b>hardly</b> <sup>[1]</sup> - 302:1 <b>HARDWICK</b> <sup>[1]</sup> - 250:18 <b>hate</b> <sup>[1]</sup> - 292:17 <b>header</b> <sup>[2]</sup> - 339:5, 339:7 <b>headers</b> <sup>[1]</sup> - 338:19 <b>heading</b> <sup>[2]</sup> - 335:12, 373:23 <b>headquarters</b> <sup>[10]</sup> - 263:13, 263:23, 268:19, 279:5, 318:20, 361:1, 363:13, 363:23, 366:14, 382:8 <b>heads</b> <sup>[2]</sup> - 295:25, 302:25 <b>Health</b> <sup>[1]</sup> - 374:10 <b>hear</b> <sup>[49]</sup> - 254:9, 262:18, 273:25, 276:17, 277:20, 281:18, 283:18, 283:22, 284:12, 286:13, 286:19, 287:8, 288:11, 288:17, 288:19, 289:1, 289:22, 290:1, 291:1, 291:3, 291:5, 291:9, 291:11, 291:13, 291:15, 291:18, 291:20, 293:7, 295:12, 296:9, 298:3, 298:6, 300:10, 301:14, 302:5, 302:9, 303:7, 304:4, 305:7, 306:6, 306:9, 306:11, 313:20, 313:25, 314:22, 314:23, 314:24, 323:25, 391:15 <b>heard</b> <sup>[10]</sup> - 292:21, 294:9, 295:21, 296:7, 301:5,</p>	<p>301:11, 304:16, 305:24, 310:13, 354:14 <b>heating</b> <sup>[1]</sup> - 283:20 <b>heavily</b> <sup>[1]</sup> - 331:4 <b>HELD</b> <sup>[1]</sup> - 250:10 <b>Hellman</b> <sup>[26]</sup> - 256:5, 257:16, 257:24, 258:4, 258:21, 359:22, 359:23, 360:7, 360:10, 360:11, 361:19, 365:3, 366:20, 367:14, 373:19, 375:5, 375:14, 376:22, 380:11, 380:23, 381:13, 383:18, 386:9, 396:1, 396:11 <b>HELLMAN</b> <sup>[2]</sup> - 251:6, 360:4 <b>hello</b> <sup>[1]</sup> - 252:14 <b>help</b> <sup>[25]</sup> - 276:5, 280:15, 281:3, 291:21, 291:22, 296:4, 296:25, 299:6, 299:19, 299:21, 299:22, 300:16, 303:3, 305:3, 311:11, 319:2, 324:4, 342:22, 344:3, 363:18, 393:18, 395:7, 395:14 <b>helped</b> <sup>[1]</sup> - 382:10 <b>helping</b> <sup>[2]</sup> - 301:10, 319:4 <b>helps</b> <sup>[3]</sup> - 296:23, 342:24, 394:22 <b>hereby</b> <sup>[1]</sup> - 397:3 <b>hid</b> <sup>[2]</sup> - 289:11, 289:12 <b>hidden</b> <sup>[1]</sup> - 312:21 <b>hide</b> <sup>[6]</sup> - 310:5, 311:5, 311:24, 385:14, 385:25, 386:2 <b>hiding</b> <sup>[1]</sup> - 385:14 <b>Hiede</b> <sup>[1]</sup> - 391:6 <b>high</b> <sup>[4]</sup> - 262:4, 278:25, 281:22, 284:15 <b>high-level</b> <sup>[1]</sup> - 262:4 <b>high-powered</b> <sup>[1]</sup> - 278:25 <b>high-ranking</b> <sup>[2]</sup> - 281:22, 284:15 <b>highest</b> <sup>[3]</sup> - 278:19, 307:6, 307:24 <b>highly</b> <sup>[1]</sup> - 354:3 <b>Hillary</b> <sup>[4]</sup> - 272:22,</p>
<b>G</b>				
<p><b>G-I-A-C</b> <sup>[1]</sup> - 322:11 <b>gain</b> <sup>[4]</sup> - 309:14, 309:22, 361:11, 362:14 <b>gains</b> <sup>[1]</sup> - 361:9 <b>game</b> <sup>[1]</sup> - 261:12 <b>games</b> <sup>[4]</sup> - 254:24, 254:25 <b>gaps</b> <sup>[1]</sup> - 335:22 <b>gathering</b> <sup>[1]</sup> - 300:19 <b>general</b> <sup>[16]</sup> - 263:1, 272:19, 279:7, 279:12, 279:24, 280:8, 280:24, 282:5, 282:6, 287:4, 289:14, 291:3, 301:13, 320:9, 352:8, 367:23 <b>General</b> <sup>[2]</sup> - 307:7, 364:21 <b>General's</b> <sup>[1]</sup> - 323:7 <b>generally</b> <sup>[9]</sup> - 256:14, 296:11, 315:14, 322:13, 323:24, 339:4, 360:19, 378:12, 391:7 <b>generated</b> <sup>[1]</sup> - 258:8 <b>gentlemen</b> <sup>[11]</sup> - 270:25, 278:13, 278:24, 287:24, 292:16, 314:9, 315:13, 323:24, 359:15, 383:9, 396:3 <b>genuine</b> <sup>[2]</sup> - 310:12, 310:17 <b>geographically</b> <sup>[2]</sup> - 360:23, 363:20 <b>get-together</b> <sup>[1]</sup> - 307:17 <b>GIAC</b> <sup>[3]</sup> - 322:8, 322:10 <b>gist</b> <sup>[1]</sup> - 374:21 <b>given</b> <sup>[8]</sup> - 268:24, 271:14, 281:20, 284:21, 289:11, 309:17, 321:15, 323:10</p>				
<b>H</b>				
<p><b>H-E-L-L-M-A-N</b> <sup>[1]</sup> - 360:10 <b>hack</b> <sup>[4]</sup> - 287:11, 287:13, 287:15, 362:3 <b>hacked</b> <sup>[4]</sup> - 300:5, 300:10, 320:14, 372:6 <b>hackers</b> <sup>[1]</sup> - 334:19 <b>hacking</b> <sup>[10]</sup> - 319:5, 346:13, 361:8, 372:4, 372:5, 377:23, 378:5, 382:15, 390:15 <b>half</b> <sup>[2]</sup> - 262:3, 311:7 <b>hall</b> <sup>[1]</sup> - 277:14 <b>hand</b> <sup>[9]</sup> - 316:10, 326:4, 326:5, 327:10, 327:12, 327:17, 359:25,</p>				

282:10, 282:16, 283:10 <b>himself</b> [5] - 288:13, 301:25, 308:1, 310:7, 313:8 <b>hired</b> [5] - 269:10, 283:23, 283:25, 287:9, 300:11 <b>hit</b> [2] - 254:23, 332:23 <b>hmm</b> [1] - 393:16 <b>hold</b> [1] - 305:2 <b>hole</b> [1] - 340:23 <b>home</b> [3] - 254:24, 328:2, 392:22 <b>honest</b> [1] - 298:6 <b>Honor</b> [51] - 252:2, 252:9, 252:17, 253:6, 253:14, 253:23, 254:2, 254:5, 255:10, 256:5, 256:22, 257:15, 257:19, 258:20, 259:8, 259:17, 260:17, 261:14, 261:17, 261:25, 262:13, 262:17, 263:4, 264:6, 264:14, 264:22, 265:2, 265:8, 268:13, 269:2, 269:5, 270:1, 270:5, 270:20, 274:6, 274:10, 278:16, 316:6, 323:15, 324:7, 324:18, 357:24, 358:1, 359:21, 367:8, 373:12, 375:10, 381:5, 388:6, 394:6, 396:18 <b>Honor's</b> [1] - 257:25 <b>HONORABLE</b> [1] - 250:10 <b>hope</b> [3] - 271:2, 277:23, 286:22 <b>hoped</b> [1] - 283:13 <b>hosted</b> [1] - 376:23 <b>hour</b> [3] - 363:25, 396:4, 396:12 <b>hours</b> [2] - 302:23, 348:23 <b>house</b> [1] - 328:1 <b>http</b> [2] - 327:7, 332:18 <b>huge</b> [1] - 285:6 <b>human</b> [2] - 325:4, 355:12 <b>humans</b> [1] - 336:13 <b>hundred</b> [2] - 298:10, 298:11 <b>hundreds</b> [3] - 325:22,	348:23, 377:2 <b>hurdle</b> [1] - 309:20 <b>hurdles</b> [1] - 297:16 <b>hurts</b> [1] - 296:23  <b>I</b>  <b>idea</b> [5] - 322:20, 328:7, 357:21, 359:6, 391:18 <b>identified</b> [1] - 378:2 <b>identify</b> [5] - 334:19, 370:17, 372:2, 377:22, 382:15 <b>identifying</b> [2] - 387:4, 387:18 <b>ignore</b> [1] - 327:6 <b>illegal</b> [1] - 284:3 <b>illustrate</b> [1] - 324:12 <b>illustrated</b> [1] - 340:16 <b>illustrating</b> [1] - 331:2 <b>illustrations</b> [1] - 334:2 <b>immediately</b> [1] - 269:17 <b>imminent</b> [2] - 302:16, 302:22 <b>impact</b> [1] - 395:13 <b>important</b> [10] - 254:8, 277:9, 307:16, 309:20, 310:21, 313:1, 313:2, 313:4, 313:7, 342:12 <b>importantly</b> [1] - 267:21 <b>impression</b> [1] - 268:4 <b>IN</b> [3] - 250:1, 271:1, 293:17 <b>inaccurate</b> [1] - 259:23 <b>incident</b> [2] - 317:13, 322:3 <b>Incident</b> [1] - 319:16 <b>incidents</b> [1] - 319:5 <b>inclined</b> [1] - 268:10 <b>included</b> [5] - 255:4, 284:23, 319:10, 320:2, 326:6 <b>including</b> [7] - 259:20, 273:15, 277:10, 277:25, 286:16, 322:8, 354:8 <b>inconsistent</b> [2] - 261:5, 267:15 <b>incredibly</b> [1] - 265:21 <b>independent</b> [4] - 278:6, 389:13, 394:1, 394:19 <b>indicate</b> [1] - 343:17 <b>indicated</b> [1] - 337:25	<b>indicating</b> [1] - 335:11 <b>indicted</b> [1] - 273:12 <b>indictment</b> [7] - 270:17, 270:19, 272:13, 273:7, 273:8, 273:11, 281:5 <b>Individual</b> [1] - 367:18 <b>individual</b> [1] - 367:24 <b>individuals</b> [2] - 389:1, 393:3 <b>inference</b> [1] - 267:22 <b>infinite</b> [1] - 254:14 <b>influence</b> [1] - 285:23 <b>infographic</b> [1] - 344:6 <b>inform</b> [1] - 252:19 <b>informant</b> [2] - 294:21, 298:25 <b>information</b> [65] - 263:12, 263:15, 267:7, 268:12, 279:12, 281:7, 281:20, 285:8, 286:14, 286:18, 286:25, 294:6, 294:10, 295:3, 295:7, 295:12, 299:19, 302:20, 303:13, 308:5, 310:7, 311:12, 311:14, 313:3, 317:12, 322:12, 322:16, 323:7, 330:8, 334:17, 336:11, 336:23, 337:1, 337:6, 338:1, 350:23, 351:7, 351:8, 351:21, 351:25, 352:7, 352:23, 358:15, 358:19, 362:2, 362:5, 362:14, 363:11, 364:2, 364:17, 364:20, 364:22, 365:20, 365:21, 368:1, 370:18, 385:13, 385:14, 393:3, 393:8, 393:9, 393:12, 393:13, 393:17, 393:18 <b>initial</b> [5] - 258:9, 368:6, 368:8, 386:19, 395:8 <b>initials</b> [1] - 300:8 <b>inject</b> [1] - 279:10 <b>injustice</b> [2] - 315:9 <b>innocent</b> [1] - 273:16 <b>inquiry</b> [2] - 329:3, 391:20 <b>inside</b> [3] - 295:2,	381:15, 381:16 <b>insight</b> [3] - 255:17, 256:15 <b>instead</b> [3] - 288:2, 325:22, 343:9 <b>institute</b> [1] - 317:14 <b>institution</b> [4] - 282:20, 293:21, 294:20, 307:18 <b>instruct</b> [3] - 276:11, 276:12, 283:3 <b>instructed</b> [1] - 286:13 <b>instructions</b> [10] - 270:13, 270:15, 271:5, 271:8, 271:9, 272:5, 273:5, 275:23, 275:25, 276:7 <b>instructs</b> [2] - 283:2, 293:10 <b>intellectual</b> [4] - 318:4, 360:22, 361:4, 361:13 <b>intelligence</b> [8] - 267:1, 267:6, 267:8, 267:9, 268:17, 268:21, 269:1, 270:7 <b>intend</b> [6] - 253:21, 263:21, 297:10, 297:24, 309:19, 314:19 <b>intended</b> [4] - 261:19, 271:10, 275:3, 276:4 <b>intensive</b> [1] - 331:4 <b>intent</b> [1] - 310:20 <b>intentionally</b> [2] - 257:21, 258:8 <b>interacted</b> [2] - 298:15, 300:12 <b>interaction</b> [2] - 350:4, 370:13 <b>interactions</b> [5] - 303:16, 304:9, 304:20, 391:8 <b>interest</b> [3] - 310:12, 310:17, 395:10 <b>interested</b> [2] - 338:8, 363:4 <b>interests</b> [2] - 284:16, 309:11 <b>interference</b> [1] - 300:4 <b>internal</b> [2] - 290:20, 328:11 <b>Internet</b> [45] - 279:18, 282:10, 283:10, 284:16, 284:17, 284:22, 284:23, 285:2, 285:4, 285:7, 285:8, 286:14,	286:15, 291:16, 294:16, 298:23, 299:11, 318:13, 318:15, 320:3, 325:13, 327:14, 327:16, 328:24, 331:4, 331:10, 333:17, 333:25, 336:1, 339:20, 341:20, 341:22, 342:3, 342:16, 342:23, 342:25, 343:2, 343:7, 343:9, 343:12, 343:21, 344:8, 347:15, 349:10, 387:12 <b>internet</b> [1] - 328:2 <b>Internet-intensive</b> [1] - 331:4 <b>interpret</b> [1] - 368:3 <b>intertwined</b> [1] - 256:23 <b>interview</b> [2] - 303:21, 351:10 <b>interviewed</b> [7] - 303:24, 305:9, 313:7, 313:12, 313:17, 313:21 <b>introduce</b> [3] - 262:22, 274:5, 316:19 <b>introduced</b> [3] - 274:3, 302:11, 383:12 <b>introduces</b> [1] - 306:22 <b>intrusion</b> [3] - 318:3, 319:4, 321:1 <b>intrusions</b> [1] - 319:18 <b>investigate</b> [12] - 281:23, 287:21, 304:25, 312:5, 319:19, 360:17, 363:17, 372:5, 378:5, 382:16, 390:11, 390:15 <b>investigated</b> [2] - 291:9, 357:5 <b>investigates</b> [3] - 255:15, 305:7, 361:25 <b>investigating</b> [6] - 313:17, 360:21, 360:22, 360:25, 361:8, 382:10 <b>Investigation</b> [2] - 272:18, 316:25 <b>investigation</b> [40] - 255:7, 256:2, 258:2, 258:11, 259:1, 259:13, 260:23, 281:24, 283:15,
--	---	---	---	--



<p>287:13, 287:19, 304:22, 307:9, 312:5, 313:8, 313:10, 317:18, 320:4, 350:25, 352:8, 383:23, 384:5, 389:3, 390:6, 390:18, 390:23, 390:24, 391:21, 392:7, 392:9, 392:15, 392:23, 393:6, 393:15, 393:19, 393:23, 393:25, 394:3, 394:10</p> <p><b>investigations</b> <sup>[16]</sup> - 307:8, 318:7, 318:9, 319:3, 319:7, 319:25, 321:11, 321:15, 321:21, 360:16, 362:20, 385:23, 391:22, 392:2, 393:3</p> <p><b>investigative</b> <sup>[9]</sup> - 257:5, 264:17, 283:24, 312:14, 358:14, 382:4, 382:19, 392:18, 392:23</p> <p><b>investigator</b> <sup>[1]</sup> - 350:22</p> <p><b>investigators</b> <sup>[3]</sup> - 284:6, 360:17, 386:7</p> <p><b>invisible</b> <sup>[1]</sup> - 332:25</p> <p><b>invoke</b> <sup>[1]</sup> - 252:22</p> <p><b>involve</b> <sup>[1]</sup> - 282:17</p> <p><b>involved</b> <sup>[11]</sup> - 266:11, 300:18, 300:20, 301:9, 301:10, 312:6, 313:9, 318:7, 318:9, 362:20, 390:3</p> <p><b>involvement</b> <sup>[4]</sup> - 324:1, 367:5, 390:22, 390:24</p> <p><b>involves</b> <sup>[1]</sup> - 320:4</p> <p><b>involving</b> <sup>[1]</sup> - 385:23</p> <p><b>IP</b> <sup>[54]</sup> - 257:23, 325:5, 325:16, 326:13, 326:14, 326:18, 327:19, 328:1, 328:12, 328:17, 329:1, 329:10, 329:14, 330:1, 330:4, 330:18, 330:21, 330:24, 331:9, 331:11, 331:18, 331:22, 332:2, 332:6, 332:12, 332:16, 335:6, 336:20,</p>	<p>337:4, 338:18, 339:1, 339:2, 339:3, 339:18, 339:19, 340:7, 340:9, 340:11, 340:17, 340:21, 340:23, 340:24, 341:5, 341:7, 343:23, 345:2, 350:8, 363:5, 363:7, 363:10, 375:18, 384:15</p> <p><b>IPs</b> <sup>[1]</sup> - 343:20</p> <p><b>issue</b> <sup>[9]</sup> - 253:16, 255:11, 261:21, 262:1, 294:19, 301:3, 352:10, 352:13, 368:5</p> <p><b>issued</b> <sup>[2]</sup> - 272:13, 305:9</p> <p><b>issues</b> <sup>[7]</sup> - 253:12, 253:15, 267:24, 291:19, 298:14, 319:24, 352:19</p> <p><b>issuing</b> <sup>[1]</sup> - 351:23</p> <p><b>item</b> <sup>[1]</sup> - 329:17</p> <p><b>itself</b> <sup>[11]</sup> - 255:20, 300:14, 307:2, 309:4, 309:13, 331:22, 350:7, 372:20, 375:1, 380:17, 387:25</p> <p><b>IV</b> <sup>[1]</sup> - 250:13</p>	<p>294:17, 294:24, 295:2, 295:5, 295:15, 298:23, 299:5, 299:8, 299:18, 299:24, 300:16, 302:11, 305:8, 309:10, 309:14, 309:15, 309:17, 353:19, 354:12, 355:12, 358:21, 358:22, 359:7</p> <p><b>Joffe's</b> <sup>[4]</sup> - 291:15, 294:24, 300:1, 309:11</p> <p><b>John</b> <sup>[1]</sup> - 274:9</p> <p><b>joined</b> <sup>[2]</sup> - 274:8, 317:15</p> <p><b>jointly</b> <sup>[1]</sup> - 389:6</p> <p><b>Jonathan</b> <sup>[2]</sup> - 252:11, 274:8</p> <p><b>JONATHAN</b> <sup>[1]</sup> - 250:13</p> <p><b>Jordan</b> <sup>[1]</sup> - 366:7</p> <p><b>JSON</b> <sup>[1]</sup> - 336:10</p> <p><b>judge</b> <sup>[8]</sup> - 265:21, 276:15, 279:21, 313:5, 314:7, 352:19, 352:22, 358:17</p> <p><b>JUDGE</b> <sup>[1]</sup> - 250:10</p> <p><b>Judge</b> <sup>[3]</sup> - 283:1, 293:7, 293:9</p> <p><b>July</b> <sup>[1]</sup> - 265:25</p> <p><b>july</b> <sup>[1]</sup> - 317:5</p> <p><b>jumbo</b> <sup>[1]</sup> - 301:2</p> <p><b>jump</b> <sup>[2]</sup> - 297:15, 347:9</p> <p><b>jumped</b> <sup>[1]</sup> - 378:19</p> <p><b>juror</b> <sup>[1]</sup> - 277:10</p> <p><b>jurors</b> <sup>[6]</sup> - 253:9, 271:12, 271:14, 272:10, 315:6, 315:8</p> <p><b>JURORS</b> <sup>[2]</sup> - 271:1, 293:17</p> <p><b>JURY</b> <sup>[1]</sup> - 250:9</p> <p><b>jury</b> <sup>[28]</sup> - 254:6, 255:13, 255:14, 258:10, 268:4, 269:3, 270:10, 270:24, 272:3, 272:5, 272:13, 278:11, 278:24, 293:4, 315:23, 316:20, 324:4, 324:11, 326:1, 349:4, 361:4, 367:13, 374:3, 381:11, 383:14, 391:24, 392:5,</p>	<p>396:10</p> <p><b>Justice</b> <sup>[4]</sup> - 280:19, 298:8, 307:5, 307:19</p> <p><b>justice</b> <sup>[1]</sup> - 315:7</p> <p><b>justify</b> <sup>[1]</sup> - 393:14</p>	<p><b>Kremlin</b> <sup>[1]</sup> - 265:19</p>
				<b>L</b>
				<p><b>labeled</b> <sup>[1]</sup> - 334:5</p> <p><b>Labor</b> <sup>[1]</sup> - 302:6</p> <p><b>labs</b> <sup>[1]</sup> - 325:15</p> <p><b>lack</b> <sup>[4]</sup> - 255:17, 256:15, 258:23, 258:24</p> <p><b>ladies</b> <sup>[11]</sup> - 270:25, 278:13, 278:24, 287:24, 292:16, 314:9, 315:13, 323:24, 359:15, 383:9, 396:3</p> <p><b>landed</b> <sup>[1]</sup> - 267:10</p> <p><b>landscape</b> <sup>[1]</sup> - 356:4</p> <p><b>language</b> <sup>[1]</sup> - 392:13</p> <p><b>laptop</b> <sup>[1]</sup> - 327:18</p> <p><b>large</b> <sup>[1]</sup> - 377:1</p> <p><b>large-scale</b> <sup>[1]</sup> - 377:1</p> <p><b>largely</b> <sup>[2]</sup> - 266:2, 283:15</p> <p><b>larger</b> <sup>[1]</sup> - 267:19</p> <p><b>largest</b> <sup>[2]</sup> - 318:15</p> <p><b>last</b> <sup>[17]</sup> - 252:20, 262:1, 295:20, 308:24, 312:1, 316:20, 331:16, 331:18, 335:4, 338:2, 354:22, 354:25, 355:2, 355:5, 355:8, 383:8, 385:3</p> <p><b>LATHAM</b> <sup>[1]</sup> - 250:19</p> <p><b>law</b> <sup>[20]</sup> - 264:11, 264:16, 275:24, 276:11, 276:12, 280:6, 283:2, 283:4, 283:20, 291:21, 292:19, 292:25, 293:7, 293:11, 298:10, 301:12, 352:2, 352:8, 352:13, 352:16</p> <p><b>laws</b> <sup>[1]</sup> - 283:3</p> <p><b>lawyer</b> <sup>[26]</sup> - 278:18, 278:20, 278:21, 279:1, 279:7, 279:8, 280:8, 284:18, 286:2, 287:9, 287:15, 293:24, 294:2, 294:6, 298:13, 299:22, 300:11, 300:13, 309:7, 312:9, 312:11, 312:16, 312:17, 312:19</p> <p><b>lawyers</b> <sup>[6]</sup> - 274:2,</p>

<p>275:2, 275:18, 277:16, 301:21, 304:3</p> <p><b>lay</b> [2] - 257:18, 323:25</p> <p><b>layers</b> [1] - 374:17</p> <p><b>lead</b> [2] - 360:16</p> <p><b>leading</b> [5] - 294:17, 294:18, 298:24, 348:17</p> <p><b>leak</b> [2] - 286:8, 286:19</p> <p><b>leaked</b> [1] - 286:20</p> <p><b>leap</b> [1] - 309:21</p> <p><b>learn</b> [8] - 281:21, 284:4, 284:17, 284:25, 286:1, 307:23, 310:17, 364:18</p> <p><b>learned</b> [5] - 252:20, 269:14, 364:1, 364:17, 364:20</p> <p><b>least</b> [6] - 259:7, 266:10, 269:22, 287:7, 375:21, 392:6</p> <p><b>leave</b> [6] - 268:4, 285:3, 315:6, 315:18, 315:20, 315:21</p> <p><b>left</b> [12] - 267:4, 281:17, 302:5, 326:4, 327:9, 327:17, 335:12, 368:7, 368:9, 368:10, 368:22, 368:23</p> <p><b>left-hand</b> [2] - 326:4, 327:17</p> <p><b>legal</b> [5] - 271:8, 276:10, 283:21, 351:20, 358:19</p> <p><b>less</b> [10] - 257:1, 277:6, 303:6, 309:16, 322:22, 322:25, 332:23, 336:13, 338:1, 394:6</p> <p><b>letters</b> [1] - 301:3</p> <p><b>level</b> [17] - 262:4, 262:8, 307:6, 329:21, 330:9, 331:15, 343:5, 349:9, 349:11, 349:12, 351:12, 362:25, 373:20, 392:7, 392:19, 393:6, 394:2</p> <p><b>levels</b> [8] - 278:19, 298:16, 307:24, 391:21, 391:24, 392:1, 392:4, 392:5</p>	<p><b>Lichtblau</b> [5] - 302:8, 302:10, 302:11</p> <p><b>lie</b> [20] - 278:20, 279:8, 279:9, 279:11, 282:5, 283:8, 286:8, 286:23, 287:7, 288:12, 288:21, 288:22, 290:8, 290:21, 292:4, 292:15, 293:19, 293:20, 304:6, 310:3</p> <p><b>lied</b> [7] - 279:8, 279:19, 281:1, 282:5, 289:18, 289:21, 292:22</p> <p><b>lies</b> [1] - 289:2</p> <p><b>life</b> [1] - 304:6</p> <p><b>likely</b> [8] - 253:1, 256:5, 257:1, 263:7, 265:2, 268:7, 276:17, 277:14</p> <p><b>line</b> [4] - 265:22, 297:19, 381:22, 386:6</p> <p><b>lines</b> [3] - 327:13, 361:16, 367:15</p> <p><b>link</b> [2] - 256:20, 259:6</p> <p><b>links</b> [1] - 357:5</p> <p><b>Linux</b> [1] - 340:22</p> <p><b>Lisa</b> [1] - 250:22</p> <p><b>LISA</b> [1] - 397:3</p> <p><b>list</b> [6] - 252:21, 343:17, 343:19, 344:15, 386:15, 386:23</p> <p><b>listed</b> [1] - 337:20</p> <p><b>listening</b> [3] - 277:11, 314:10, 314:11</p> <p><b>Listrak</b> [1] - 376:24</p> <p><b>litigants</b> [1] - 352:6</p> <p><b>littered</b> [1] - 312:15</p> <p><b>Littleton</b> [1] - 317:19</p> <p><b>live</b> [1] - 303:9</p> <p><b>livelihood</b> [2] - 298:20, 310:1</p> <p><b>lives</b> [1] - 299:11</p> <p><b>LLP</b> [1] - 250:19</p> <p><b>loaded</b> [1] - 292:8</p> <p><b>local</b> [2] - 328:16, 331:7</p> <p><b>located</b> [2] - 318:22, 360:23</p> <p><b>locked</b> [1] - 271:18</p> <p><b>log</b> [6] - 335:10, 335:11, 338:4, 375:17, 375:19</p> <p><b>logged</b> [1] - 371:20</p> <p><b>logical</b> [1] - 329:14</p> <p><b>logistically</b> [1] - 261:17</p>	<p><b>logs</b> [4] - 336:16, 337:6, 337:9, 339:23</p> <p><b>long-time</b> [1] - 294:9</p> <p><b>look</b> [68] - 253:19, 253:25, 256:1, 257:20, 257:22, 262:2, 285:1, 286:8, 286:9, 299:9, 299:11, 311:8, 314:1, 326:7, 326:9, 327:2, 328:11, 329:17, 331:2, 331:7, 332:7, 333:19, 333:20, 333:25, 335:4, 337:3, 337:4, 337:7, 339:15, 339:17, 339:22, 340:2, 340:3, 340:4, 340:5, 340:8, 340:9, 340:11, 340:16, 340:17, 340:21, 341:1, 341:5, 341:10, 342:2, 343:24, 349:8, 349:16, 349:17, 349:18, 350:7, 350:8, 350:11, 350:14, 368:14, 370:20, 371:25, 372:1, 375:1, 375:14, 375:25, 387:12, 387:19, 395:13</p> <p><b>Look</b> [1] - 311:20</p> <p><b>look-up</b> [27] - 253:25, 327:2, 332:7, 333:19, 333:20, 335:4, 337:3, 339:15, 339:17, 339:22, 340:2, 340:4, 340:5, 340:8, 340:9, 340:11, 340:16, 349:8, 349:16, 349:17, 349:18, 350:7, 350:8, 350:11, 350:14, 387:12</p> <p><b>look-ups</b> [6] - 253:19, 257:22, 299:9, 331:2, 333:25, 342:2</p> <p><b>looked</b> [16] - 255:4, 255:25, 260:23, 286:12, 305:16, 336:20, 337:6, 337:24, 339:17, 340:11, 350:1, 373:9, 386:5, 386:15, 391:16</p> <p><b>looking</b> [25] - 253:24,</p>	<p>285:8, 318:7, 333:2, 333:21, 337:9, 337:15, 338:10, 345:12, 358:14, 362:14, 372:19, 372:23, 373:3, 375:19, 378:6, 379:1, 379:5, 381:2, 384:2, 384:3, 386:13, 386:17, 387:17, 394:18</p> <p><b>looks</b> [7] - 262:12, 300:22, 338:1, 361:10, 368:20, 375:16, 386:13</p> <p><b>lose</b> [2] - 309:24</p> <p><b>loud</b> [1] - 312:22</p> <p><b>lower</b> [1] - 394:2</p> <p><b>lower-level</b> [1] - 394:2</p> <p><b>lowest</b> [2] - 392:14, 392:19</p> <p><b>lunch</b> [5] - 396:4, 396:8, 396:12, 396:19, 396:22</p> <p><b>lying</b> [2] - 307:22, 309:23</p>	<p>283:13</p> <p><b>Manos</b> [1] - 252:20</p> <p><b>map</b> [1] - 325:4</p> <p><b>mapping</b> [1] - 325:23</p> <p><b>maps</b> [1] - 325:8</p> <p><b>marked</b> [2] - 375:4, 380:21</p> <p><b>marketing</b> [4] - 282:1, 377:1, 377:16</p> <p><b>marshals</b> [1] - 277:21</p> <p><b>Martin</b> [19] - 253:17, 253:21, 253:24, 255:12, 316:7, 316:19, 316:22, 316:23, 323:16, 323:22, 324:6, 324:9, 327:22, 338:19, 348:2, 348:6, 355:1, 358:4, 359:11</p> <p><b>MARTIN</b> [2] - 251:3, 316:16</p> <p><b>mask</b> [2] - 316:12, 359:25</p> <p><b>master's</b> [3] - 317:11, 323:12, 348:21</p> <p><b>match</b> [1] - 341:6</p> <p><b>matches</b> [1] - 341:7</p> <p><b>materiality</b> [5] - 255:15, 255:21, 256:21, 258:3, 264:15</p> <p><b>materially</b> [3] - 272:16, 279:24, 283:5</p> <p><b>materials</b> [12] - 264:19, 366:9, 369:12, 369:17, 369:19, 369:21, 371:12, 371:18, 371:20, 371:23, 372:17, 383:1</p> <p><b>math</b> [1] - 317:10</p> <p><b>matter</b> [21] - 254:19, 263:11, 264:17, 264:18, 272:17, 287:14, 287:21, 289:16, 292:23, 297:11, 297:24, 304:2, 307:7, 312:1, 312:2, 312:8, 314:20, 390:18, 395:3, 395:4, 395:9</p> <p><b>mattered</b> [8] - 290:22, 308:8, 314:1, 394:12, 394:16, 394:17, 395:1, 395:16</p> <p><b>matters</b> [5] - 252:18, 306:25, 349:1, 349:2, 362:20</p>
<b>M</b>				
<p><b>M-A-R-T-I-N</b> [1] - 316:22</p> <p><b>mail</b> [2] - 386:22, 387:8</p> <p><b>mail1.trump</b> [4] - 376:2, 376:9, 376:18, 376:22</p> <p><b>mail1.trump-email.</b> <b>com</b> [2] - 376:2, 376:18</p> <p><b>main</b> [3] - 253:16, 313:10, 392:16</p> <p><b>maintain</b> [1] - 354:6</p> <p><b>major</b> [5] - 280:6, 281:12, 283:20, 287:2, 319:17</p> <p><b>malicious</b> [1] - 346:12</p> <p><b>malware</b> [4] - 320:15, 320:17, 321:1, 322:3</p> <p><b>man</b> [5] - 298:5, 298:6, 298:7, 308:1, 353:19</p> <p><b>manage</b> [2] - 320:24, 382:10</p> <p><b>managed</b> [2] - 319:1, 320:8</p> <p><b>management</b> [1] - 376:25</p> <p><b>manager</b> [2] - 363:14, 363:15</p> <p><b>manages</b> [1] - 321:6</p> <p><b>manipulated</b> [1] -</p>				

<p><b>mean</b> [28] - 255:5, 259:12, 260:6, 263:15, 265:13, 274:2, 274:12, 287:14, 326:18, 329:6, 331:6, 338:21, 338:22, 339:23, 341:14, 342:15, 349:17, 349:19, 350:6, 351:18, 351:23, 352:4, 365:6, 375:18, 383:25, 384:18, 385:10, 385:19</p> <p><b>meaning</b> [1] - 378:3</p> <p><b>means</b> [8] - 257:17, 277:2, 322:14, 339:8, 341:15, 362:15, 367:19, 385:20</p> <p><b>mechanism</b> [1] - 365:7</p> <p><b>media</b> [3] - 277:24, 278:1, 278:7</p> <p><b>meet</b> [5] - 280:9, 280:20, 280:21, 287:18, 302:9</p> <p><b>meeting</b> [49] - 263:5, 264:3, 266:1, 266:9, 266:10, 266:19, 266:22, 266:24, 268:8, 269:15, 269:18, 281:19, 287:3, 288:13, 288:17, 288:19, 288:20, 290:11, 291:6, 292:3, 292:7, 296:8, 296:9, 296:16, 296:17, 303:7, 303:8, 303:10, 303:11, 303:15, 303:22, 304:7, 304:10, 305:22, 306:1, 307:3, 307:16, 307:24, 308:19, 309:14, 310:24, 311:8, 311:10, 311:15, 311:17, 311:18, 357:15, 357:17</p> <p><b>meetings</b> [4] - 286:5, 289:5, 289:8, 302:10</p> <p><b>meets</b> [2] - 303:5, 304:23</p> <p><b>member</b> [2] - 274:12, 277:24</p> <p><b>members</b> [2] - 277:10, 285:10</p> <p><b>memo</b> [2] - 309:6,</p>	<p>311:1</p> <p><b>memorialized</b> [1] - 291:7</p> <p><b>memories</b> [1] - 278:12</p> <p><b>memorize</b> [3] - 325:22, 326:17, 326:19</p> <p><b>memory</b> [3] - 306:7, 306:14, 306:15</p> <p><b>mention</b> [1] - 289:22</p> <p><b>mentioned</b> [7] - 317:20, 346:16, 347:11, 367:24, 369:14, 377:22, 390:2</p> <p><b>merely</b> [1] - 281:25</p> <p><b>message</b> [5] - 296:5, 305:21, 379:20, 380:6</p> <p><b>messing</b> [1] - 346:22</p> <p><b>met</b> [17] - 266:6, 267:22, 269:7, 280:24, 281:2, 286:11, 292:2, 295:14, 295:15, 297:21, 304:16, 310:23, 348:8, 353:20, 353:21, 353:24, 357:2</p> <p><b>methodology</b> [6] - 378:21, 378:22, 382:23, 386:25, 387:21, 388:14</p> <p><b>Michael</b> [21] - 252:4, 252:11, 272:14, 274:9, 274:18, 274:19, 278:25, 293:19, 293:22, 293:23, 295:3, 295:4, 295:18, 295:19, 297:7, 305:20, 309:5, 309:22, 313:8, 313:12</p> <p><b>MICHAEL</b> [3] - 250:6, 250:13, 250:17</p> <p><b>Michigan</b> [1] - 374:11</p> <p><b>microphone</b> [2] - 338:13, 338:15</p> <p><b>middle</b> [2] - 272:8, 345:5</p> <p><b>midway</b> [1] - 363:13</p> <p><b>might</b> [32] - 258:6, 258:7, 258:8, 261:10, 277:24, 282:23, 287:18, 289:23, 291:13, 291:23, 305:15, 323:25, 324:11, 327:1, 331:4, 334:14, 334:22,</p>	<p>337:10, 338:25, 339:23, 346:21, 349:22, 380:12, 392:6, 393:14, 393:17, 393:20, 393:21, 394:1, 394:2, 395:15, 395:23</p> <p><b>million</b> [2] - 284:19, 294:23</p> <p><b>millions</b> [4] - 294:25, 299:2, 335:19, 354:8</p> <p><b>mind</b> [2] - 314:21, 361:3</p> <p><b>minors</b> [1] - 317:10</p> <p><b>minute</b> [1] - 295:21</p> <p><b>minutes</b> [5] - 303:6, 315:15, 315:25, 394:7, 396:5</p> <p><b>misleading</b> [1] - 268:4</p> <p><b>misled</b> [1] - 290:22</p> <p><b>misrepresenting</b> [1] - 256:19</p> <p><b>miss</b> [1] - 387:10</p> <p><b>mission</b> [1] - 292:25</p> <p><b>mistake</b> [2] - 288:24, 292:23</p> <p><b>mix</b> [1] - 258:22</p> <p><b>moment</b> [2] - 302:15, 304:21</p> <p><b>Monday</b> [3] - 304:8, 304:11, 305:22</p> <p><b>money</b> [1] - 362:2</p> <p><b>monitors</b> [1] - 300:23</p> <p><b>month</b> [1] - 364:8</p> <p><b>months</b> [5] - 288:12, 300:4, 303:22, 307:3, 310:14</p> <p><b>MOREIRA</b> [1] - 397:3</p> <p><b>Moreira</b> [3] - 250:22, 278:8, 397:10</p> <p><b>MORNING</b> [1] - 250:6</p> <p><b>morning</b> [20] - 252:2, 252:5, 252:9, 252:12, 252:13, 252:16, 270:25, 271:1, 274:7, 274:15, 293:16, 293:17, 315:14, 315:15, 316:19, 338:24, 348:6, 348:7, 360:7, 360:8</p> <p><b>Moscow</b> [2] - 374:8, 374:9</p> <p><b>most</b> [19] - 272:10, 298:1, 307:17, 313:10, 318:15, 320:18, 321:17, 322:15, 326:5, 331:6, 339:15,</p>	<p>343:5, 349:8, 350:6, 360:25, 387:3, 392:6</p> <p><b>mostly</b> [2] - 321:18, 382:11</p> <p><b>motion</b> [1] - 253:16</p> <p><b>motivated</b> [2] - 310:12, 362:1</p> <p><b>motivation</b> [5] - 313:6, 313:19, 393:7, 393:9, 395:3</p> <p><b>motivations</b> [7] - 313:2, 313:12, 313:14, 313:23, 314:5, 393:20, 395:23</p> <p><b>motive</b> [4] - 264:13, 264:14, 267:25, 393:16</p> <p><b>motives</b> [1] - 393:24</p> <p><b>mouth</b> [1] - 295:23</p> <p><b>move</b> [5] - 324:18, 324:23, 331:14, 339:9, 339:12</p> <p><b>moved</b> [6] - 320:7, 324:22, 363:13, 367:11, 375:13, 381:10</p> <p><b>MR</b> [81] - 252:9, 252:16, 252:17, 253:6, 253:14, 255:9, 256:4, 256:22, 257:8, 257:15, 257:19, 258:15, 258:20, 259:8, 259:17, 260:5, 260:8, 261:14, 261:17, 261:25, 262:12, 262:15, 262:17, 262:24, 263:3, 263:17, 264:5, 264:14, 264:22, 265:8, 265:17, 265:21, 266:5, 266:7, 266:14, 266:23, 267:13, 268:13, 269:2, 269:5, 270:1, 270:4, 270:5, 270:20, 274:15, 293:16, 293:18, 301:1, 304:1, 323:20, 324:21, 348:5, 355:7, 355:9, 355:11, 357:24, 358:23, 359:19, 359:21, 360:6, 361:18, 367:8, 367:10, 367:12, 373:12, 373:14,</p>	<p>373:16, 373:18, 375:10, 375:12, 376:20, 381:5, 381:7, 381:9, 381:12, 388:6, 388:8, 394:6, 395:25, 396:18, 396:21</p> <p><b>MS</b> [18] - 274:6, 278:16, 316:6, 316:18, 323:15, 323:18, 324:7, 324:8, 324:18, 324:23, 325:1, 326:22, 338:14, 345:24, 348:2, 358:1, 358:3, 359:10</p> <p><b>mud</b> [1] - 306:16</p> <p><b>multiple</b> [8] - 303:15, 340:19, 349:2, 351:4, 353:11, 366:3, 367:2, 374:17</p> <p><b>must</b> [7] - 273:3, 273:10, 273:24, 276:21, 277:3, 278:11</p>
<b>N</b>				
<p><b>Name</b> [4] - 284:24, 325:2, 325:11, 362:23</p> <p><b>name</b> [25] - 254:16, 270:18, 274:7, 274:17, 316:20, 316:22, 325:8, 330:11, 331:18, 338:25, 339:18, 340:24, 341:10, 349:25, 353:19, 360:9, 363:10, 379:6, 379:7, 384:12, 384:24, 387:7, 391:2</p> <p><b>named</b> [2] - 282:10, 366:7</p> <p><b>namely</b> [2] - 272:18, 272:22</p> <p><b>names</b> [10] - 325:4, 325:23, 326:4, 326:6, 334:21, 341:1, 341:5, 369:23, 391:2</p> <p><b>narrative</b> [10] - 369:24, 372:1, 372:11, 372:23, 372:24, 373:7, 373:25, 375:9, 378:9, 389:10</p> <p><b>narrow</b> [2] - 386:16, 386:22</p> <p><b>Natalie</b> [1] - 274:18</p>				

<p><b>NATALIE</b> [1] - 250:18</p> <p><b>Nate</b> [5] - 364:24, 366:6, 366:19, 369:13, 372:14</p> <p><b>National</b> [4] - 287:10, 300:6, 312:10, 312:20</p> <p><b>national</b> [13] - 282:3, 290:25, 293:23, 294:1, 294:5, 294:6, 298:12, 304:3, 310:13, 310:18, 311:12, 312:10, 362:20</p> <p><b>nature</b> [2] - 356:11, 391:7</p> <p><b>necessarily</b> [3] - 353:11, 353:15, 377:14</p> <p><b>necessary</b> [1] - 305:11</p> <p><b>need</b> [9] - 313:20, 327:22, 350:22, 350:23, 365:13, 365:14, 365:15, 371:8, 393:17</p> <p><b>needs</b> [2] - 255:14, 363:5</p> <p><b>negative</b> [1] - 283:14</p> <p><b>negatively</b> [1] - 256:2</p> <p><b>net</b> [2] - 329:23, 331:17</p> <p><b>Netflix</b> [1] - 347:5</p> <p><b>network</b> [14] - 318:10, 318:12, 319:2, 319:3, 321:6, 322:2, 323:14, 324:13, 334:18, 342:22, 343:3, 343:5, 344:14, 361:10</p> <p><b>networks</b> [2] - 318:14, 341:4</p> <p><b>Neustar</b> [2] - 334:24, 354:11</p> <p><b>neutral</b> [1] - 393:21</p> <p><b>neutrally</b> [1] - 388:4</p> <p><b>never</b> [14] - 260:9, 260:12, 260:13, 260:16, 260:22, 293:2, 298:21, 306:12, 308:1, 327:11, 328:10, 329:15, 348:8</p> <p><b>New</b> [6] - 250:20, 286:21, 295:13, 302:7, 302:22, 305:1</p> <p><b>new</b> [4] - 329:17, 345:13, 345:14</p> <p><b>news</b> [4] - 281:12, 283:14, 287:2, 303:12</p>	<p><b>next</b> [45] - 271:7, 274:23, 277:13, 280:10, 292:5, 294:1, 303:5, 308:10, 318:18, 320:6, 326:22, 328:4, 328:14, 328:15, 328:22, 329:11, 330:6, 330:15, 330:20, 331:19, 331:25, 332:4, 332:15, 332:20, 333:12, 334:25, 336:3, 337:2, 337:17, 339:12, 342:19, 344:2, 344:17, 344:18, 344:24, 345:10, 345:21, 347:12, 365:14, 366:12, 366:15, 368:9, 368:18, 369:4, 384:8</p> <p><b>nice</b> [2] - 274:15, 396:8</p> <p><b>night</b> [2] - 262:1, 290:11</p> <p><b>nobody</b> [1] - 293:21</p> <p><b>node</b> [9] - 343:25, 344:24, 344:25, 345:3, 345:5, 346:17, 346:19, 347:13, 347:21</p> <p><b>node'</b> [1] - 374:10</p> <p><b>node's</b> [1] - 345:2</p> <p><b>nodes</b> [7] - 343:18, 343:20, 344:15, 344:22, 344:23, 345:15, 347:24</p> <p><b>none</b> [4] - 304:13, 308:7, 313:13, 335:17</p> <p><b>nonexpert</b> [1] - 299:13</p> <p><b>nonprofit</b> [2] - 343:2, 344:7</p> <p><b>nonsensical</b> [1] - 298:4</p> <p><b>normal</b> [2] - 278:22, 279:6</p> <p><b>Northeast</b> [1] - 250:15</p> <p><b>northern</b> [1] - 343:13</p> <p><b>notably</b> [1] - 304:13</p> <p><b>note</b> [1] - 257:8</p> <p><b>notebook</b> [2] - 271:14, 271:21</p> <p><b>notebooks</b> [1] - 271:18</p> <p><b>noted</b> [1] - 271:22</p> <p><b>notes</b> [26] - 263:10, 263:11, 264:9, 266:25, 271:15, 271:16, 271:17, 278:12, 291:8, 292:2, 303:6, 304:8, 304:14, 304:17, 304:18, 304:19, 304:20, 306:18, 310:21, 310:22, 312:13, 312:14, 315:18, 315:21, 397:5</p> <p><b>nothing</b> [14] - 284:3, 296:14, 301:21, 303:9, 305:13, 306:21, 309:14, 309:23, 335:9, 357:11, 359:10, 378:4, 382:16, 396:16</p> <p><b>notice</b> [3] - 271:13, 280:20, 383:10</p> <p><b>notifications</b> [1] - 253:13</p> <p><b>notion</b> [2] - 264:15, 377:9</p> <p><b>NS1.Google.com</b> [1] - 330:25</p> <p><b>nuances</b> [1] - 348:12</p> <p><b>number</b> [18] - 266:20, 266:25, 267:20, 269:16, 269:17, 272:1, 272:8, 291:1, 325:9, 326:9, 346:6, 367:14, 371:25, 378:21, 379:1, 386:17, 392:20</p> <p><b>numbers</b> [9] - 301:2, 325:21, 325:23, 325:24, 326:5, 326:6, 326:17, 327:24, 369:22</p> <p><b>numeric</b> [1] - 329:3</p> <p><b>numerical</b> [4] - 325:5, 325:8, 325:16, 326:12</p> <p><b>numerous</b> [1] - 389:1</p> <p><b>NW</b> [2] - 250:23, 397:12</p> <p><b>NY</b> [1] - 250:20</p>	<p><b>objecting</b> [1] - 277:6</p> <p><b>objection</b> [18] - 253:3, 261:24, 270:21, 276:17, 276:20, 276:24, 277:2, 323:19, 323:20, 324:20, 324:21, 358:23, 367:10, 373:14, 375:12, 381:7, 388:6, 388:8</p> <p><b>objections</b> [1] - 262:5</p> <p><b>objective</b> [1] - 388:17</p> <p><b>observations</b> [2] - 382:6, 382:21</p> <p><b>observe</b> [1] - 277:18</p> <p><b>obtain</b> [4] - 322:16, 365:25, 366:16</p> <p><b>obtained</b> [4] - 366:11, 367:3, 370:10, 371:18</p> <p><b>obtaining</b> [1] - 367:6</p> <p><b>obviously</b> [4] - 260:17, 325:19, 335:16, 342:3</p> <p><b>occasionally</b> [2] - 276:18, 276:20</p> <p><b>occur</b> [2] - 257:23, 304:9</p> <p><b>occurred</b> [5] - 254:1, 340:15, 392:9, 392:11, 393:1</p> <p><b>occurrence</b> [1] - 383:16</p> <p><b>October</b> [1] - 283:11</p> <p><b>OF</b> [4] - 250:1, 250:3, 250:9, 397:1</p> <p><b>offense</b> [7] - 273:2, 273:3, 273:5, 273:21, 273:22, 273:24, 277:19</p> <p><b>offer</b> [4] - 258:4, 261:19, 263:24, 265:3</p> <p><b>offering</b> [3] - 259:25, 260:1, 263:25</p> <p><b>offers</b> [4] - 367:8, 373:12, 375:11, 381:5</p> <p><b>Office</b> [2] - 274:3, 352:9</p> <p><b>OFFICE</b> [1] - 250:14</p> <p><b>office</b> [6] - 279:7, 317:25, 363:21, 370:4, 370:11, 370:14</p> <p><b>officer</b> [1] - 317:18</p> <p><b>officers</b> [3] - 352:2, 352:13, 352:16</p> <p><b>offices</b> [4] - 266:2, 363:16, 363:18, 382:10</p>	<p><b>OFFICIAL</b> [1] - 397:1</p> <p><b>Official</b> [1] - 250:22</p> <p><b>official</b> [1] - 397:11</p> <p><b>official's</b> [1] - 281:1</p> <p><b>officials</b> [6] - 281:22, 290:22, 291:5, 292:2, 307:4, 307:18</p> <p><b>often</b> [1] - 318:9</p> <p><b>oftentimes</b> [2] - 337:11, 343:12</p> <p><b>old</b> [1] - 332:21</p> <p><b>once</b> [4] - 278:4, 371:20, 388:23, 392:17</p> <p><b>one</b> [93] - 252:19, 253:19, 253:20, 253:25, 255:17, 257:8, 261:11, 267:20, 267:22, 269:6, 269:16, 270:14, 271:14, 273:23, 274:2, 277:6, 277:16, 277:21, 279:17, 279:22, 282:9, 283:3, 284:17, 292:13, 292:19, 294:8, 294:17, 296:11, 297:12, 297:15, 298:10, 299:10, 299:12, 299:22, 301:12, 301:17, 303:10, 303:18, 304:9, 304:25, 306:19, 308:20, 308:21, 312:23, 313:20, 313:21, 313:22, 314:5, 314:22, 314:23, 318:10, 321:12, 322:15, 323:13, 325:18, 326:13, 336:4, 336:7, 337:18, 339:7, 339:8, 339:17, 340:11, 341:13, 342:15, 346:9, 349:9, 349:13, 349:19, 349:23, 350:4, 350:21, 352:14, 357:2, 363:2, 368:3, 368:9, 368:16, 368:17, 369:22, 371:25, 373:17, 379:16, 388:1, 388:12, 391:5, 392:4, 392:17, 394:16</p>
<b>O</b>			
<p><b>oath</b> [4] - 289:3, 289:4, 306:7, 306:9</p> <p><b>obfuscate</b> [1] - 374:18</p> <p><b>obfuscating</b> [1] - 385:13</p> <p><b>object</b> [4] - 253:17, 254:10, 276:18, 277:4</p>			

<p><b>ones</b> [2] - 345:6, 388:1</p> <p><b>ongoing</b> [2] - 278:1, 374:8</p> <p><b>onion</b> [2] - 324:14, 342:21</p> <p><b>online</b> [2] - 285:9, 286:15</p> <p><b>open</b> [13] - 268:7, 278:9, 287:19, 314:21, 392:4, 392:9, 392:12, 392:17, 392:22, 393:19, 393:25, 394:2, 395:6</p> <p><b>opened</b> [6] - 281:22, 281:24, 390:17, 392:20, 393:23, 394:10</p> <p><b>opening</b> [10] - 271:4, 274:24, 274:25, 275:1, 275:2, 275:19, 278:15, 314:10, 314:12, 393:14</p> <p><b>opens</b> [1] - 391:20</p> <p><b>operated</b> [2] - 343:1, 343:4</p> <p><b>operation</b> [2] - 385:9, 385:10</p> <p><b>Operations</b> [1] - 318:20</p> <p><b>operations</b> [2] - 319:1, 382:9</p> <p><b>opine</b> [1] - 386:25</p> <p><b>opining</b> [1] - 254:3</p> <p><b>opinion</b> [4] - 382:5, 382:20, 388:5, 388:9</p> <p><b>oppo</b> [1] - 268:24</p> <p><b>opportunity</b> [2] - 285:22, 293:5</p> <p><b>opposed</b> [5] - 268:25, 347:23, 384:16, 387:19, 392:11</p> <p><b>opposing</b> [2] - 279:17, 284:7</p> <p><b>opposite</b> [9] - 296:9, 296:22, 307:2, 307:14, 307:21, 308:4, 308:19, 312:7, 314:23</p> <p><b>opposition</b> [8] - 264:10, 269:9, 269:23, 283:25, 284:1, 284:5, 284:14, 285:7</p> <p><b>OpsSec</b> [5] - 385:6, 385:8, 385:9, 385:18</p> <p><b>order</b> [16] - 258:10, 261:4, 273:9, 275:14, 276:2,</p>	<p>289:23, 290:2, 345:15, 349:15, 351:23, 351:25, 368:4, 368:5, 371:5, 374:18, 392:5</p> <p><b>orders</b> [1] - 352:7</p> <p><b>Organization</b> [3] - 374:6, 374:16, 376:16</p> <p><b>organization</b> [22] - 281:9, 285:13, 285:19, 287:2, 299:17, 303:12, 305:12, 343:2, 357:6, 364:4, 365:21, 374:13, 376:9, 378:2, 378:16, 379:4, 379:8, 380:20, 384:14, 384:23, 384:25, 391:19</p> <p><b>organization's</b> [1] - 385:11</p> <p><b>organizations</b> [1] - 294:13</p> <p><b>origin</b> [2] - 325:12, 325:13</p> <p><b>origins</b> [2] - 255:21, 257:4</p> <p><b>otherwise</b> [2] - 371:14, 371:22</p> <p><b>outlet</b> [1] - 281:12</p> <p><b>outside</b> [2] - 393:4, 396:6</p> <p><b>overall</b> [3] - 379:1, 379:2, 387:24</p> <p><b>overnight</b> [1] - 271:19</p> <p><b>overrule</b> [2] - 277:2, 388:10</p> <p><b>overruled</b> [1] - 358:25</p> <p><b>overseas</b> [1] - 269:13</p> <p><b>overseeing</b> [1] - 321:12</p> <p><b>overt</b> [2] - 384:24, 386:2</p> <p><b>own</b> [16] - 279:13, 279:20, 280:13, 280:17, 284:13, 289:17, 300:3, 328:11, 340:4, 340:8, 358:8, 358:11, 360:16, 379:6, 384:14, 395:17</p> <p><b>owned</b> [1] - 294:13</p>	<p>263:9, 324:24, 324:25, 332:19, 332:21, 333:1, 375:6, 375:14, 376:21, 383:8, 386:4</p> <p><b>PAGE</b> [1] - 251:2</p> <p><b>pages</b> [1] - 301:4</p> <p><b>paid</b> [4] - 284:19, 286:4, 299:1, 353:18</p> <p><b>Paper</b> [2] - 265:16, 373:22</p> <p><b>paper</b> [33] - 258:5, 261:18, 261:20, 261:24, 262:3, 269:18, 365:10, 373:20, 373:21, 373:24, 375:1, 376:13, 376:15, 377:18, 378:13, 378:18, 379:17, 381:23, 381:25, 382:12, 382:23, 383:1, 383:8, 386:6, 386:11, 387:22, 388:3, 388:13, 388:23, 389:6, 389:8, 391:8</p> <p><b>paper's</b> [1] - 380:14</p> <p><b>papers</b> [2] - 281:16, 292:8</p> <p><b>paragraph</b> [5] - 381:23, 381:24, 383:20, 384:8, 385:3</p> <p><b>paralegal</b> [1] - 252:25</p> <p><b>paraphrasing</b> [1] - 376:7</p> <p><b>pardon</b> [1] - 376:7</p> <p><b>part</b> [27] - 256:23, 257:4, 258:22, 267:19, 268:24, 269:9, 269:22, 269:23, 276:13, 283:8, 283:22, 283:23, 285:2, 302:6, 319:23, 323:12, 344:14, 344:19, 357:4, 357:7, 357:18, 375:21, 376:1, 383:7, 386:5, 386:11</p> <p><b>participate</b> [1] - 343:5</p> <p><b>particular</b> [21] - 253:23, 254:3, 254:16, 256:14, 265:12, 272:1, 272:20, 311:16, 324:2, 336:10, 339:18, 341:16, 341:20, 344:11, 346:4, 349:19,</p>	<p>371:22, 377:6, 381:18, 388:15, 388:19</p> <p><b>particularly</b> [4] - 255:16, 327:23, 341:15, 377:17</p> <p><b>parties</b> [2] - 277:4, 277:15</p> <p><b>parties'</b> [1] - 270:14</p> <p><b>partisan</b> [2] - 309:1, 311:20</p> <p><b>partners</b> [1] - 301:12</p> <p><b>parts</b> [4] - 263:16, 286:7, 318:11, 369:22</p> <p><b>party</b> [5] - 300:6, 300:14, 309:4, 312:10, 356:16</p> <p><b>pass</b> [2] - 262:7, 381:20</p> <p><b>passed</b> [3] - 267:9, 340:10, 390:10</p> <p><b>passive</b> [31] - 321:7, 321:9, 333:13, 333:14, 333:16, 334:5, 334:6, 334:7, 334:15, 334:22, 335:7, 335:10, 335:11, 335:17, 335:20, 335:23, 335:24, 336:7, 336:15, 337:4, 341:15, 341:17, 341:20, 342:1, 342:4, 342:6, 342:9, 342:18, 353:12, 353:14, 358:8</p> <p><b>past</b> [1] - 331:9</p> <p><b>patents</b> [1] - 354:12</p> <p><b>path</b> [10] - 337:5, 343:8, 344:22, 345:8, 345:14, 345:17, 345:19, 345:20, 346:16, 368:15</p> <p><b>patience</b> [2] - 314:10, 314:11</p> <p><b>Pause</b> [1] - 252:7</p> <p><b>pawn</b> [1] - 293:2</p> <p><b>pay</b> [2] - 278:14, 353:17</p> <p><b>paying</b> [1] - 283:24</p> <p><b>payments</b> [1] - 354:7</p> <p><b>pays</b> [1] - 353:9</p> <p><b>PC</b> [1] - 331:8</p> <p><b>peer</b> [1] - 323:13</p> <p><b>peer-reviewed</b> [1] - 323:13</p> <p><b>Pennsylvania</b> [4] - 279:5, 374:7,</p>	<p>376:17, 376:23</p> <p><b>Pennsylvania-based</b> [1] - 376:23</p> <p><b>people</b> [33] - 282:14, 282:15, 286:13, 295:7, 298:1, 304:17, 313:9, 313:11, 313:15, 313:16, 322:20, 322:22, 322:25, 325:16, 325:20, 326:4, 326:5, 334:18, 341:1, 342:22, 342:24, 346:6, 346:10, 347:3, 351:10, 351:18, 362:1, 365:25, 366:3, 366:4, 367:3, 380:2, 384:22</p> <p><b>per</b> [1] - 284:20</p> <p><b>percent</b> [3] - 255:18, 255:19, 341:21</p> <p><b>percentage</b> [1] - 342:17</p> <p><b>perform</b> [2] - 371:24, 392:21</p> <p><b>performing</b> [2] - 389:2, 390:5</p> <p><b>perhaps</b> [1] - 377:15</p> <p><b>period</b> [1] - 354:17</p> <p><b>Perkins</b> [4] - 263:6, 266:1, 298:9, 298:11</p> <p><b>permission</b> [1] - 253:3</p> <p><b>permit</b> [1] - 257:25</p> <p><b>person</b> [14] - 254:6, 273:9, 308:25, 309:7, 347:22, 367:20, 367:25, 368:12, 368:16, 368:17, 368:18, 369:4, 395:6, 395:17</p> <p><b>person's</b> [3] - 325:8, 365:13, 365:14</p> <p><b>personal</b> [2] - 280:9, 389:14</p> <p><b>personally</b> [1] - 288:8</p> <p><b>perspective</b> [1] - 276:6</p> <p><b>Peter</b> [4] - 368:13, 368:25, 369:1, 370:9</p> <p><b>phishing</b> [1] - 341:8</p> <p><b>phone</b> [14] - 280:9, 290:16, 304:11, 304:20, 305:22, 309:6, 325:7, 326:1, 326:3, 326:7, 326:9, 333:3, 333:4</p> <p><b>phones</b> [1] - 320:13</p> <p><b>physical</b> [2] - 290:5,</p>
	<p><b>P</b></p>			
	<p><b>Packet</b> [1] - 334:24</p> <p><b>page</b> [12] - 262:3,</p>			

<p>291:24</p> <p><b>physically</b> [1] - 363:20</p> <p><b>pick</b> [2] - 338:3, 338:6</p> <p><b>picked</b> [3] - 272:3, 334:2, 342:4</p> <p><b>picks</b> [4] - 344:21, 344:23, 345:13, 345:14</p> <p><b>picture</b> [1] - 327:12</p> <p><b>piece</b> [9] - 365:8, 365:10, 367:20, 377:6, 377:8, 377:18, 377:22, 378:6, 379:11</p> <p><b>pieces</b> [4] - 291:24, 336:22, 337:1, 371:8</p> <p><b>pipe</b> [1] - 337:23</p> <p><b>pitch</b> [1] - 302:7</p> <p><b>pizza</b> [1] - 333:6</p> <p><b>place</b> [10] - 308:8, 308:17, 329:16, 333:6, 333:18, 334:8, 346:19, 347:3, 347:18, 370:21</p> <p><b>places</b> [1] - 333:18</p> <p><b>Plaintiff</b> [1] - 250:4</p> <p><b>plan</b> [12] - 283:8, 283:9, 283:11, 283:12, 283:13, 283:15, 283:16, 286:6, 286:7, 291:17, 295:6, 295:8</p> <p><b>plant</b> [2] - 284:9, 290:19</p> <p><b>plate</b> [1] - 253:12</p> <p><b>plausible</b> [1] - 374:15</p> <p><b>play</b> [2] - 327:8, 365:22</p> <p><b>played</b> [1] - 303:25</p> <p><b>players</b> [1] - 313:10</p> <p><b>pled</b> [1] - 272:23</p> <p><b>plugged</b> [1] - 328:2</p> <p><b>point</b> [10] - 262:9, 308:5, 311:13, 328:6, 331:8, 332:7, 365:14, 395:5, 395:7, 395:19</p> <p><b>pointers</b> [1] - 254:23</p> <p><b>points</b> [1] - 268:14</p> <p><b>police</b> [1] - 317:18</p> <p><b>political</b> [11] - 278:23, 279:9, 282:21, 282:23, 285:23, 287:17, 292:15, 293:2, 312:16, 312:21, 395:2</p> <p><b>politics</b> [5] - 282:15, 284:2, 292:18, 312:6, 312:9</p>	<p><b>populated</b> [1] - 335:13</p> <p><b>portion</b> [12] - 261:20, 263:8, 263:20, 263:22, 331:18, 342:2, 373:20, 375:8, 376:15, 383:10, 383:13, 386:6</p> <p><b>position</b> [12] - 284:21, 318:25, 319:1, 319:13, 319:14, 320:6, 320:21, 321:13, 360:13, 363:12, 369:1, 369:3</p> <p><b>positions</b> [2] - 317:17, 317:22</p> <p><b>possession</b> [1] - 356:21</p> <p><b>possibility</b> [1] - 257:20</p> <p><b>possible</b> [4] - 277:23, 331:3, 346:20, 346:21</p> <p><b>postings</b> [1] - 278:7</p> <p><b>potential</b> [5] - 261:21, 286:16, 294:11, 305:11, 350:3</p> <p><b>potentially</b> [3] - 346:17, 351:4, 351:12</p> <p><b>power</b> [1] - 279:19</p> <p><b>powered</b> [1] - 278:25</p> <p><b>powerful</b> [2] - 278:22, 280:6</p> <p><b>PowerPoint</b> [1] - 324:17</p> <p><b>practice</b> [1] - 294:2</p> <p><b>practices</b> [1] - 291:22</p> <p><b>predicated</b> [1] - 392:25</p> <p><b>predictable</b> [1] - 347:3</p> <p><b>preference</b> [1] - 396:19</p> <p><b>prejudicial</b> [2] - 265:22, 268:3</p> <p><b>preliminary</b> [6] - 252:18, 270:13, 271:5, 392:2, 392:12, 393:22</p> <p><b>premarked</b> [2] - 366:21, 372:25</p> <p><b>preparation</b> [1] - 324:9</p> <p><b>prepare</b> [1] - 324:10</p> <p><b>prepared</b> [4] - 258:5, 261:18, 264:9, 324:12</p> <p><b>preparing</b> [1] - 367:6</p> <p><b>presence</b> [1] - 277:21</p> <p><b>present</b> [2] - 274:20, 303:10</p> <p><b>presentation</b> [4] -</p>	<p>275:6, 275:18, 324:17, 358:7</p> <p><b>presentations</b> [1] - 323:10</p> <p><b>presented</b> [2] - 272:25, 299:8</p> <p><b>presenting</b> [1] - 264:17</p> <p><b>presidential</b> [8] - 279:2, 279:10, 279:13, 279:18, 283:12, 283:19, 379:6, 384:10</p> <p><b>press</b> [6] - 284:9, 287:21, 287:23, 290:19, 295:9, 296:14</p> <p><b>presumably</b> [4] - 366:14, 369:16, 369:24, 384:2</p> <p><b>presumed</b> [2] - 273:16, 383:21</p> <p><b>presumption</b> [1] - 273:16</p> <p><b>pretty</b> [7] - 260:7, 328:7, 338:22, 344:6, 348:10, 383:15, 386:10</p> <p><b>prevent</b> [1] - 315:9</p> <p><b>preview</b> [1] - 275:3</p> <p><b>previously</b> [1] - 261:6</p> <p><b>price</b> [1] - 353:16</p> <p><b>Priestap</b> [5] - 263:9, 263:21, 264:7, 265:7, 268:24</p> <p><b>Priestap's</b> [3] - 266:21, 266:25, 267:11</p> <p><b>primarily</b> [3] - 318:3, 391:4, 391:10</p> <p><b>principally</b> [1] - 372:17</p> <p><b>principle</b> [1] - 335:24</p> <p><b>privacy</b> [6] - 303:23, 343:2, 344:8, 346:11, 347:8, 347:11</p> <p><b>private</b> [8] - 256:11, 294:2, 298:9, 305:8, 347:15, 351:16, 351:19, 358:6</p> <p><b>privilege</b> [7] - 274:19, 278:18, 278:19, 278:21, 292:13, 304:1</p> <p><b>privileged</b> [1] - 292:14</p> <p><b>Prize</b> [2] - 295:13, 302:8</p> <p><b>problem</b> [1] - 253:9</p> <p><b>procedures</b> [1] -</p>	<p>291:22</p> <p><b>proceed</b> [2] - 274:22, 316:15</p> <p><b>proceeded</b> [1] - 281:7</p> <p><b>proceeding</b> [1] - 269:13</p> <p><b>proceedings</b> [1] - 397:6</p> <p><b>process</b> [7] - 335:4, 344:21, 352:10, 358:20, 363:9, 365:22, 371:11</p> <p><b>processes</b> [2] - 340:1, 351:20</p> <p><b>professional</b> [5] - 321:17, 321:24, 322:6, 322:7, 324:5</p> <p><b>professionals</b> [1] - 303:23</p> <p><b>proffer</b> [1] - 268:23</p> <p><b>proffering</b> [1] - 269:21</p> <p><b>program</b> [4] - 320:8, 323:12, 363:14, 363:15</p> <p><b>programs</b> [1] - 336:12</p> <p><b>progress</b> [1] - 319:13</p> <p><b>project</b> [4] - 264:25, 288:1, 290:15, 387:2</p> <p><b>Project</b> [3] - 343:2, 343:19, 343:24</p> <p><b>prominent</b> [1] - 298:12</p> <p><b>promote</b> [2] - 309:10, 309:11</p> <p><b>promoted</b> [1] - 320:23</p> <p><b>promptly</b> [1] - 281:22</p> <p><b>proof</b> [1] - 259:19</p> <p><b>property</b> [4] - 318:4, 360:22, 361:5, 361:13</p> <p><b>propose</b> [2] - 261:20, 263:8</p> <p><b>proposition</b> [1] - 260:16</p> <p><b>propositions</b> [1] - 260:7</p> <p><b>prosecuting</b> [2] - 298:8, 352:9</p> <p><b>prosecution</b> [2] - 274:2, 274:5</p> <p><b>prosecutor</b> [1] - 293:25</p> <p><b>protect</b> [1] - 293:1</p> <p><b>protecting</b> [3] - 385:12, 385:13</p> <p><b>protection</b> [1] - 374:18</p> <p><b>protocol</b> [1] - 339:20</p> <p><b>proud</b> [1] - 389:23</p> <p><b>prove</b> [8] - 273:3, 289:17, 289:21, 297:14, 306:22,</p>	<p>308:12, 342:8</p> <p><b>proven</b> [3] - 273:14, 273:17, 273:23</p> <p><b>provenance</b> [1] - 356:8</p> <p><b>proverbial</b> [1] - 282:13</p> <p><b>proves</b> [1] - 273:20</p> <p><b>provide</b> [7] - 270:5, 323:22, 331:23, 334:8, 372:9, 390:7, 393:10</p> <p><b>provided</b> [8] - 267:7, 355:18, 356:10, 356:16, 357:11, 364:20, 370:17, 381:25</p> <p><b>provider</b> [5] - 328:24, 331:10, 334:1, 343:10, 351:11</p> <p><b>providers</b> [3] - 334:11, 351:9, 353:14</p> <p><b>provides</b> [2] - 371:4, 376:25</p> <p><b>providing</b> [2] - 395:21, 395:24</p> <p><b>proxies</b> [1] - 347:4</p> <p><b>proximity</b> [1] - 384:7</p> <p><b>proxy</b> [3] - 346:25, 347:1, 384:16</p> <p><b>psychology</b> [1] - 317:10</p> <p><b>public</b> [6] - 270:6, 295:5, 295:6, 295:17, 299:20, 301:11</p> <p><b>publish</b> [5] - 286:24, 302:13, 367:13, 373:17, 381:11</p> <p><b>published</b> [4] - 323:9, 323:12, 343:17, 343:21</p> <p><b>Pulitzer</b> [2] - 295:13, 302:8</p> <p><b>Pulitzer-Prize-winning</b> [2] - 295:13, 302:8</p> <p><b>pull</b> [1] - 334:25</p> <p><b>pulled</b> [1] - 300:17</p> <p><b>purchase</b> [1] - 356:9</p> <p><b>purchased</b> [1] - 356:14</p> <p><b>purchasing</b> [1] - 353:6</p> <p><b>pure</b> [1] - 393:21</p> <p><b>purported</b> [2] - 377:25, 379:18</p> <p><b>purpose</b> [5] - 264:12, 266:9, 311:9, 345:25, 346:1</p> <p><b>purposes</b> [1] - 331:2</p> <p><b>pursuant</b> [1] - 263:7</p>
---	---	--	--	--

<p><b>put</b> [9] - 258:1, 275:13, 286:1, 290:8, 298:5, 338:4, 339:5, 379:6, 379:14</p> <p><b>Putin's</b> [1] - 294:13</p> <p><b>puts</b> [1] - 336:9</p> <p><b>putting</b> [2] - 337:15, 380:11</p>	<p><b>ranging</b> [1] - 322:2</p> <p><b>ranking</b> [2] - 281:22, 284:15</p> <p><b>RAO</b> [1] - 250:18</p> <p><b>Rao</b> [1] - 274:18</p> <p><b>rather</b> [2] - 256:20, 289:16</p> <p><b>raw</b> [1] - 338:6</p> <p><b>RDR</b> [3] - 250:22, 397:3, 397:10</p> <p><b>reach</b> [8] - 258:15, 287:21, 302:25, 305:1, 315:2, 331:20, 333:7, 388:15</p> <p><b>reached</b> [2] - 302:7, 389:13</p> <p><b>reaches</b> [1] - 332:13</p> <p><b>reaching</b> [1] - 388:21</p> <p><b>read</b> [10] - 263:6, 268:11, 336:12, 336:13, 337:14, 368:6, 374:3, 376:15, 381:24, 384:9</p> <p><b>readable</b> [1] - 325:4</p> <p><b>reading</b> [3] - 277:11, 368:7, 383:18</p> <p><b>ready</b> [7] - 270:10, 271:3, 315:16, 316:3, 337:17, 364:11, 396:8</p> <p><b>real</b> [5] - 258:25, 305:13, 377:23, 380:13, 394:24</p> <p><b>realized</b> [1] - 339:19</p> <p><b>realizes</b> [1] - 302:24</p> <p><b>really</b> [8] - 308:23, 325:20, 329:15, 341:11, 356:2, 372:19, 377:7, 378:6</p> <p><b>reason</b> [5] - 255:14, 301:23, 344:12, 379:14, 381:18</p> <p><b>reasonable</b> [9] - 273:1, 273:4, 273:14, 273:18, 273:21, 280:1, 297:14, 308:8, 308:14</p> <p><b>reasonably</b> [1] - 376:24</p> <p><b>reasons</b> [8] - 287:7, 346:6, 346:15, 378:17, 383:13, 388:19, 395:4, 395:12</p> <p><b>rebuttal</b> [2] - 275:17, 276:3</p> <p><b>receipt</b> [5] - 263:12,</p>	<p>264:8, 267:1, 368:7, 368:8</p> <p><b>receive</b> [2] - 322:20, 367:20</p> <p><b>received</b> [13] - 255:16, 264:3, 265:7, 281:7, 302:19, 322:5, 323:4, 323:5, 364:2, 364:19, 367:25, 374:1, 380:5</p> <p><b>receives</b> [1] - 256:11</p> <p><b>recent</b> [1] - 374:18</p> <p><b>Recess</b> [1] - 316:1</p> <p><b>recess</b> [1] - 396:22</p> <p><b>recesses</b> [1] - 271:19</p> <p><b>recipients</b> [1] - 377:2</p> <p><b>recognize</b> [7] - 324:16, 366:24, 367:5, 373:4, 373:9, 375:7, 380:23</p> <p><b>recollection</b> [2] - 364:15, 377:7</p> <p><b>reconvene</b> [1] - 396:5</p> <p><b>record</b> [9] - 252:3, 269:8, 276:25, 299:12, 303:7, 306:18, 342:9, 360:9, 365:16</p> <p><b>recorded</b> [2] - 304:13, 335:9</p> <p><b>recording</b> [1] - 336:19</p> <p><b>recordings</b> [1] - 304:8</p> <p><b>records</b> [11] - 288:2, 290:14, 290:16, 290:20, 290:21, 291:23, 336:22, 342:7, 342:9, 364:12, 370:24</p> <p><b>recursive</b> [1] - 330:2</p> <p><b>redact</b> [1] - 261:22</p> <p><b>redacted</b> [2] - 264:1, 383:10</p> <p><b>redactions</b> [1] - 383:15</p> <p><b>redirect</b> [2] - 275:10, 275:15</p> <p><b>REDIRECT</b> [1] - 358:2</p> <p><b>refer</b> [3] - 273:25, 274:11, 337:25</p> <p><b>reference</b> [1] - 257:10</p> <p><b>referenced</b> [1] - 261:18</p> <p><b>references</b> [2] - 265:4, 312:16</p> <p><b>referred</b> [2] - 337:22, 382:22</p> <p><b>referring</b> [7] - 270:6, 289:9, 318:12, 336:14, 336:15, 377:4, 380:9</p>	<p><b>refers</b> [1] - 257:19</p> <p><b>reflect</b> [3] - 264:8, 264:9, 282:2</p> <p><b>reflected</b> [1] - 389:7</p> <p><b>reflecting</b> [1] - 263:12</p> <p><b>refreshed</b> [1] - 364:15</p> <p><b>regard</b> [1] - 350:11</p> <p><b>regarding</b> [3] - 261:4, 268:11, 394:23</p> <p><b>registered</b> [3] - 384:14, 384:25, 387:15</p> <p><b>regular</b> [2] - 272:9, 347:8</p> <p><b>regularly</b> [1] - 389:20</p> <p><b>relate</b> [2] - 261:10, 263:16</p> <p><b>related</b> [6] - 266:20, 321:24, 348:1, 353:24, 368:1, 386:22</p> <p><b>relation</b> [1] - 287:11</p> <p><b>relationship</b> [9] - 298:22, 303:18, 303:20, 308:24, 309:8, 309:25, 312:4, 376:25, 395:11</p> <p><b>relationships</b> [3] - 299:1, 304:2</p> <p><b>relevance</b> [1] - 265:23</p> <p><b>relevant</b> [10] - 256:6, 256:12, 256:13, 257:5, 267:25, 297:20, 351:24, 352:7, 393:7, 393:10</p> <p><b>reliability</b> [2] - 300:1, 358:16</p> <p><b>relied</b> [3] - 294:22, 299:4, 354:20</p> <p><b>relinquish</b> [2] - 368:17, 368:24</p> <p><b>Relinquished</b> [1] - 368:11</p> <p><b>relinquished</b> [3] - 368:21, 368:23, 369:5</p> <p><b>relinquishing</b> [1] - 368:13</p> <p><b>rely</b> [2] - 278:11, 372:17</p> <p><b>remain</b> [2] - 316:9, 359:25</p> <p><b>remains</b> [1] - 273:16</p> <p><b>remarkable</b> [1] - 301:21</p> <p><b>remember</b> [17] - 306:17, 306:19, 325:17, 325:21, 326:6, 326:19,</p>	<p>352:25, 355:19, 364:8, 364:9, 366:5, 369:3, 370:11, 370:14, 370:16, 374:21, 392:13</p> <p><b>remembers</b> [1] - 268:9</p> <p><b>remind</b> [1] - 277:8</p> <p><b>remove</b> [2] - 316:12, 359:24</p> <p><b>repeat</b> [2] - 355:8, 388:11</p> <p><b>rephrase</b> [2] - 355:7, 355:10</p> <p><b>report</b> [15] - 264:8, 265:4, 265:6, 265:12, 265:15, 268:23, 269:19, 287:23, 303:8, 334:13, 382:3, 382:18, 385:7, 385:18</p> <p><b>reported</b> [1] - 265:19</p> <p><b>Reporter</b> [3] - 250:22, 250:22, 397:11</p> <p><b>REPORTER</b> [3] - 321:3, 338:12, 397:1</p> <p><b>reporter</b> [8] - 278:8, 286:21, 286:24, 295:13, 302:8, 302:12, 316:21, 327:23</p> <p><b>reporters</b> [1] - 295:16</p> <p><b>reports</b> [6] - 265:1, 265:5, 265:9, 304:8, 304:14, 321:22</p> <p><b>represent</b> [1] - 287:10</p> <p><b>representation</b> [2] - 259:5, 272:17</p> <p><b>representative</b> [1] - 254:20</p> <p><b>representatives</b> [1] - 286:11</p> <p><b>represented</b> [4] - 261:5, 309:1, 309:2, 378:14</p> <p><b>representing</b> [5] - 274:19, 287:17, 311:9, 311:16, 312:19</p> <p><b>represents</b> [3] - 327:13, 339:1, 342:2</p> <p><b>Republicans</b> [4] - 282:22, 284:2, 292:17, 298:9</p> <p><b>request</b> [9] - 326:24, 327:1, 330:3, 332:7, 332:18, 335:5, 352:16, 352:20, 352:22</p> <p><b>requested</b> [1] - 287:3</p>
<b>Q</b>				
<p><b>qualified</b> [2] - 324:6, 388:9</p> <p><b>qualify</b> [1] - 323:21</p> <p><b>queried</b> [1] - 337:23</p> <p><b>queries</b> [3] - 333:17, 333:19, 342:3</p> <p><b>query</b> [16] - 332:11, 333:20, 336:6, 336:8, 336:9, 336:23, 336:24, 336:25, 337:8, 337:21, 337:24, 342:7, 342:8</p> <p><b>questionable</b> [6] - 378:23, 378:25, 382:4, 382:19, 387:23, 393:25</p> <p><b>questioning</b> [1] - 265:22</p> <p><b>questions</b> [17] - 262:19, 275:19, 275:20, 276:10, 276:18, 277:7, 294:7, 297:6, 297:15, 297:23, 299:7, 305:19, 314:16, 334:12, 339:13, 355:15, 355:19</p> <p><b>quick</b> [1] - 268:14</p> <p><b>quickly</b> [1] - 381:18</p> <p><b>quite</b> [2] - 348:14, 348:24</p> <p><b>quote</b> [4] - 266:1, 280:13, 280:15</p>				
<b>R</b>				
<p><b>raise</b> [3] - 262:13, 316:9, 359:25</p> <p><b>raised</b> [3] - 261:25, 262:9, 294:6</p> <p><b>random</b> [6] - 343:7, 343:11, 344:22, 344:23, 346:16, 347:24</p> <p><b>randomly</b> [1] - 272:2</p> <p><b>range</b> [5] - 260:20, 322:18, 361:25, 362:5, 389:22</p>				

<b>requests</b> <sup>[1]</sup> - 334:11 <b>required</b> <sup>[2]</sup> - 275:13, 289:3 <b>research</b> <sup>[18]</sup> - 264:10, 268:24, 269:9, 269:23, 278:6, 283:25, 284:1, 284:5, 284:14, 285:7, 286:3, 325:14, 325:15, 382:3, 382:18, 386:7, 396:7 <b>researched</b> <sup>[1]</sup> - 295:15 <b>researcher</b> <sup>[1]</sup> - 383:24 <b>researchers</b> <sup>[3]</sup> - 281:11, 284:6, 379:16 <b>reserve</b> <sup>[1]</sup> - 268:6 <b>resolved</b> <sup>[1]</sup> - 331:8 <b>resolver</b> <sup>[1]</sup> - 330:3 <b>resource</b> <sup>[1]</sup> - 343:6 <b>resources</b> <sup>[3]</sup> - 279:19, 281:23, 290:24 <b>respect</b> <sup>[7]</sup> - 270:14, 306:2, 326:10, 339:14, 358:6, 358:13, 384:21 <b>respected</b> <sup>[2]</sup> - 354:3, 354:18 <b>respond</b> <sup>[2]</sup> - 319:4, 319:17 <b>response</b> <sup>[2]</sup> - 317:13, 322:4 <b>Response</b> <sup>[1]</sup> - 319:16 <b>responsibilities</b> <sup>[4]</sup> - 271:12, 276:9, 318:24, 320:22 <b>responsibility</b> <sup>[3]</sup> - 315:7, 315:8, 363:17 <b>rest</b> <sup>[1]</sup> - 369:16 <b>restricts</b> <sup>[1]</sup> - 346:8 <b>result</b> <sup>[2]</sup> - 388:15, 389:22 <b>resulting</b> <sup>[1]</sup> - 354:7 <b>retaining</b> <sup>[1]</sup> - 264:24 <b>retired</b> <sup>[1]</sup> - 288:18 <b>return</b> <sup>[6]</sup> - 293:10, 303:14, 311:19, 332:2, 371:8, 371:9 <b>returned</b> <sup>[4]</sup> - 335:8, 350:8, 379:19, 379:20 <b>returning</b> <sup>[2]</sup> - 370:3, 386:4 <b>returns</b> <sup>[1]</sup> - 332:12 <b>revealing</b> <sup>[1]</sup> - 347:20 <b>reveals</b> <sup>[2]</sup> - 382:4,	382:19 <b>reverse</b> <sup>[1]</sup> - 320:14 <b>review</b> <sup>[6]</sup> - 262:8, 292:1, 319:11, 321:20, 364:15, 372:8 <b>reviewed</b> <sup>[3]</sup> - 323:13, 339:13, 364:12 <b>reviews</b> <sup>[1]</sup> - 321:22 <b>right-hand</b> <sup>[1]</sup> - 326:5 <b>rights</b> <sup>[3]</sup> - 318:4, 360:22, 361:13 <b>ring</b> <sup>[1]</sup> - 379:11 <b>risks</b> <sup>[1]</sup> - 271:25 <b>roadmap</b> <sup>[1]</sup> - 275:3 <b>Rodney</b> <sup>[18]</sup> - 272:22, 282:11, 283:11, 284:11, 288:10, 294:9, 294:15, 294:16, 294:24, 295:2, 298:23, 305:8, 353:19, 354:12, 355:12, 358:21 <b>role</b> <sup>[6]</sup> - 264:23, 264:25, 283:1, 365:22, 365:24, 365:25 <b>Rome</b> <sup>[1]</sup> - 268:18 <b>Room</b> <sup>[2]</sup> - 250:23, 397:12 <b>room</b> <sup>[2]</sup> - 278:11, 282:13 <b>root</b> <sup>[6]</sup> - 329:12, 329:13, 329:18, 330:1, 330:3, 330:7 <b>rooted</b> <sup>[1]</sup> - 255:3 <b>roundabout</b> <sup>[1]</sup> - 378:24 <b>route</b> <sup>[2]</sup> - 335:14, 343:11 <b>router</b> <sup>[2]</sup> - 324:14, 342:21 <b>routes</b> <sup>[1]</sup> - 343:7 <b>routinely</b> <sup>[1]</sup> - 256:10 <b>routing</b> <sup>[1]</sup> - 346:2 <b>row</b> <sup>[2]</sup> - 368:9, 368:23 <b>rude</b> <sup>[1]</sup> - 277:18 <b>rule</b> <sup>[1]</sup> - 276:10 <b>rules</b> <sup>[3]</sup> - 271:6, 277:19, 278:22 <b>ruling</b> <sup>[3]</sup> - 257:25, 259:9, 259:21 <b>run</b> <sup>[11]</sup> - 276:9, 277:14, 277:15, 281:12, 286:22, 295:22, 331:21, 334:9, 343:3, 344:13 <b>running</b> <sup>[2]</sup> - 287:2, 319:15	<b>Russia</b> <sup>[17]</sup> - 282:15, 285:20, 286:17, 294:8, 294:11, 299:8, 302:21, 307:8, 378:2, 378:16, 379:4, 379:10, 380:20, 382:11, 385:24, 386:1, 391:19 <b>Russian</b> <sup>[15]</sup> - 281:9, 285:15, 294:13, 299:17, 300:4, 364:4, 384:12, 384:15, 385:5, 385:15, 385:17, 385:22, 385:23, 386:3 <b>Russians</b> <sup>[2]</sup> - 300:5, 300:10	<b>search</b> <sup>[17]</sup> - 291:16, 345:7, 351:2, 351:19, 352:2, 352:13, 352:16, 352:19, 352:20, 352:21, 352:22, 352:23, 358:5, 358:14, 358:17, 386:21, 392:21 <b>searching</b> <sup>[1]</sup> - 387:9 <b>season</b> <sup>[1]</sup> - 254:23 <b>seat</b> <sup>[5]</sup> - 272:8, 272:9, 316:9, 360:3, 396:15 <b>seated</b> <sup>[1]</sup> - 316:3 <b>seats</b> <sup>[3]</sup> - 272:2, 272:6 <b>second</b> <sup>[15]</sup> - 252:6, 263:9, 275:6, 284:10, 286:19, 287:20, 297:9, 305:6, 324:23, 332:24, 345:2, 345:3, 368:23, 372:8, 378:6 <b>secondly</b> <sup>[1]</sup> - 269:11 <b>secret</b> <sup>[29]</sup> - 265:18, 269:14, 279:3, 281:8, 281:11, 285:14, 285:18, 294:3, 298:17, 302:3, 361:15, 364:3, 376:6, 376:7, 378:1, 378:15, 379:3, 379:7, 379:11, 380:19, 383:2, 384:11, 384:13, 384:19, 384:23, 385:1, 385:14, 386:1, 391:18 <b>secretive</b> <sup>[1]</sup> - 296:15 <b>section</b> <sup>[2]</sup> - 335:12, 374:4 <b>security</b> <sup>[32]</sup> - 282:3, 287:9, 290:25, 293:23, 293:24, 294:2, 294:6, 294:7, 298:12, 298:13, 304:3, 309:25, 310:13, 310:18, 311:13, 317:12, 321:24, 322:9, 322:16, 322:18, 323:18, 323:23, 334:17, 341:2, 346:23, 349:1, 349:2, 354:4, 354:5, 362:20, 385:9, 385:10 <b>see</b> <sup>[49]</sup> - 274:15,	280:16, 280:17, 286:17, 286:23, 288:1, 290:8, 290:10, 290:13, 290:16, 290:20, 291:23, 300:22, 300:25, 301:1, 302:18, 304:5, 304:18, 306:15, 307:4, 307:11, 308:17, 311:1, 311:15, 312:13, 312:22, 312:23, 314:2, 315:24, 320:13, 326:10, 329:6, 332:19, 333:5, 333:10, 333:22, 334:4, 339:1, 339:23, 341:17, 342:6, 366:22, 367:15, 367:18, 369:17, 375:6, 383:11, 396:14 <b>seeing</b> <sup>[5]</sup> - 262:10, 271:21, 327:5, 342:2, 344:4 <b>seek</b> <sup>[1]</sup> - 265:3 <b>seeking</b> <sup>[1]</sup> - 288:18 <b>seem</b> <sup>[1]</sup> - 260:7 <b>seize</b> <sup>[2]</sup> - 371:4, 371:5 <b>Seizing</b> <sup>[1]</sup> - 367:18 <b>selected</b> <sup>[2]</sup> - 272:2, 338:16 <b>selling</b> <sup>[1]</sup> - 295:1 <b>send</b> <sup>[6]</sup> - 285:3, 308:23, 308:25, 309:7, 347:1, 349:15 <b>sending</b> <sup>[4]</sup> - 282:1, 349:14, 377:2, 377:16 <b>sends</b> <sup>[1]</sup> - 344:23 <b>senior</b> <sup>[3]</sup> - 307:4, 307:17, 369:8 <b>senior-most</b> <sup>[1]</sup> - 307:17 <b>sense</b> <sup>[12]</sup> - 271:10, 287:1, 297:2, 301:2, 303:19, 308:22, 350:6, 379:4, 379:24, 385:15, 387:18, 388:21 <b>sensitive</b> <sup>[3]</sup> - 280:11, 362:4 <b>sensor</b> <sup>[5]</sup> - 334:5, 335:15, 335:19, 336:8, 337:5 <b>sensors</b> <sup>[7]</sup> - 334:6, 334:7, 335:8, 335:18, 336:7,
<b>S</b>				
<b>sake</b> <sup>[2]</sup> - 327:10, 327:20 <b>sample</b> <sup>[6]</sup> - 254:15, 254:18, 254:20, 255:6, 260:3, 260:21 <b>sampling</b> <sup>[1]</sup> - 335:25 <b>San</b> <sup>[1]</sup> - 360:25 <b>Sands</b> <sup>[3]</sup> - 317:14, 391:4, 391:5 <b>sat</b> <sup>[1]</sup> - 279:8 <b>satellites</b> <sup>[1]</sup> - 327:15 <b>saw</b> <sup>[2]</sup> - 285:21, 372:21 <b>scale</b> <sup>[2]</sup> - 325:16, 377:1 <b>scales</b> <sup>[1]</sup> - 353:16 <b>scattered</b> <sup>[1]</sup> - 319:22 <b>scenes</b> <sup>[4]</sup> - 329:7, 330:12, 330:14, 333:9 <b>scheduling</b> <sup>[1]</sup> - 289:24 <b>science</b> <sup>[3]</sup> - 317:9, 317:10, 348:19 <b>scientific</b> <sup>[1]</sup> - 324:4 <b>scientists</b> <sup>[1]</sup> - 321:18 <b>SCOTT</b> <sup>[3]</sup> - 251:6, 360:4, 360:10 <b>Scott</b> <sup>[2]</sup> - 359:22, 360:10 <b>scour</b> <sup>[1]</sup> - 286:14 <b>screen</b> <sup>[6]</sup> - 338:2, 366:21, 373:1, 375:3, 380:22, 380:24 <b>Seago</b> <sup>[1]</sup> - 269:6 <b>SEAN</b> <sup>[1]</sup> - 250:17 <b>Sean</b> <sup>[1]</sup> - 274:17				



<p>341:20, 358:8  <b>sent</b> [5] - 254:1, 296:6,  338:10, 349:17,  388:25  <b>sentence</b> [2] - 384:9,  385:3  <b>separate</b> [2] - 340:1,  350:11  <b>separated</b> [2] - 337:12  <b>separator</b> [1] - 337:22  <b>September</b> [14] -  263:19, 265:14,  278:24, 280:5,  302:18, 302:19,  303:22, 304:7,  357:16, 357:19,  364:7, 364:10,  366:9, 366:12  <b>series</b> [5] - 263:11,  304:9, 331:2,  333:18, 343:11  <b>serious</b> [10] - 272:10,  279:1, 279:2,  281:23, 293:23,  294:5, 294:6, 295:7,  302:12, 308:14  <b>seriously</b> [3] - 294:14,  295:4, 309:16  <b>serve</b> [5] - 253:1,  253:4, 279:20,  352:17, 352:23  <b>served</b> [1] - 280:19  <b>server</b> [72] - 265:18,  269:14, 281:25,  282:1, 282:2,  285:14, 285:17,  290:24, 300:21,  325:18, 326:15,  328:21, 328:23,  328:25, 329:4,  329:9, 329:22,  329:23, 329:25,  330:1, 330:2, 330:3,  330:7, 330:9,  330:11, 330:17,  330:21, 330:24,  331:21, 332:19,  333:25, 335:6,  335:8, 336:21,  336:24, 341:17,  343:13, 344:13,  344:15, 344:16,  347:1, 347:2,  347:19, 349:10,  351:3, 351:11,  351:21, 374:7,  374:10, 374:15,  376:17, 376:18,  377:15, 379:18,  379:19, 379:21,</p>	<p>384:13, 387:7,  387:10, 387:14,  387:15, 387:25  <b>server's</b> [2] - 339:3,  344:14  <b>servers</b> [24] - 300:6,  300:11, 329:13,  329:14, 329:15,  329:19, 330:11,  334:2, 335:17,  335:19, 341:16,  341:19, 342:16,  343:11, 347:9,  363:6, 374:12,  377:13, 386:20,  386:24, 387:4,  387:19  <b>servers</b> [1] - 384:16  <b>service</b> [7] - 328:24,  331:10, 334:1,  343:10, 351:9,  351:10, 353:18  <b>services</b> [4] - 334:9,  342:18, 354:8  <b>serving</b> [1] - 293:4  <b>SESSION</b> [1] - 250:6  <b>set</b> [18] - 254:15,  254:17, 281:12,  310:24, 311:8,  311:14, 324:12,  326:3, 326:5, 334:7,  346:18, 347:12,  353:13, 359:18,  373:25, 386:5,  386:11, 386:19  <b>Seth</b> [1] - 254:23  <b>sets</b> [2] - 321:7, 321:8  <b>setting</b> [3] - 288:17,  311:17, 325:14  <b>several</b> [5] - 254:12,  267:10, 291:24,  323:13, 336:22  <b>shape</b> [1] - 286:6  <b>shared</b> [1] - 389:21  <b>Shaw</b> [8] - 252:10,  274:4, 274:7,  278:15, 293:14,  306:2, 316:5, 357:25  <b>SHAW</b> [19] - 250:14,  274:6, 278:16,  316:6, 316:18,  323:15, 323:18,  324:7, 324:8,  324:18, 324:23,  325:1, 326:22,  338:14, 345:24,  348:2, 358:1, 358:3,  359:10  <b>Shaw</b>).....  ..... [2] - 251:4,</p>	<p>251:5  <b>sheet</b> [1] - 371:3  <b>short</b> [2] - 280:20,  303:20  <b>shortcomings</b> [1] -  261:1  <b>shortly</b> [1] - 335:13  <b>show</b> [53] - 255:6,  255:8, 275:5,  278:17, 279:5,  279:15, 279:25,  280:4, 280:5,  280:23, 281:6,  281:14, 282:8,  283:7, 283:8,  284:15, 284:21,  285:5, 285:11,  285:16, 285:21,  286:7, 286:10,  287:6, 287:25,  288:2, 289:12,  290:7, 290:14,  290:17, 290:21,  292:9, 292:24,  296:7, 296:20,  297:5, 297:6,  300:19, 301:23,  306:22, 308:18,  324:10, 324:11,  324:15, 349:13,  349:22, 350:3,  366:20, 372:25,  375:3, 380:21,  380:22, 393:1  <b>showed</b> [7] - 281:8,  285:13, 294:12,  295:8, 299:15,  301:25, 380:14  <b>showing</b> [2] - 259:23,  294:10  <b>shown</b> [2] - 276:5,  383:13  <b>shows</b> [12] - 308:4,  310:19, 312:7,  315:4, 315:5, 337:6,  344:8, 349:25,  350:2, 374:16,  375:17  <b>shut</b> [4] - 295:23,  296:21, 296:24,  305:4  <b>sic</b> [1] - 326:9  <b>sic</b>] [1] - 319:16  <b>side</b> [12] - 275:4,  275:10, 276:19,  277:6, 325:10,  326:4, 326:5,  327:10, 327:12,  327:17, 345:19  <b>side's</b> [2] - 276:6,</p>	<p>277:7  <b>sign</b> [5] - 365:10,  365:11, 365:13,  365:14, 368:18  <b>Signature</b> [1] - 367:18  <b>signature</b> [3] - 370:4,  370:8, 370:10  <b>signatures</b> [6] -  365:25, 366:11,  366:17, 367:3,  367:6, 370:7  <b>significance</b> [1] -  261:9  <b>significantly</b> [1] -  347:7  <b>similar</b> [8] - 264:3,  319:9, 322:4,  326:12, 333:4,  333:8, 337:3, 377:12  <b>similarly</b> [4] - 325:7,  340:5, 340:9, 349:18  <b>simple</b> [3] - 283:6,  346:24, 347:4  <b>simplified</b> [1] - 335:3  <b>simply</b> [5] - 256:20,  275:3, 277:5,  333:14, 349:25  <b>single</b> [1] - 272:14  <b>sit</b> [2] - 253:4, 292:11  <b>site</b> [1] - 346:5  <b>sitting</b> [2] - 252:25,  356:25  <b>situated</b> [1] - 252:6  <b>six</b> [2] - 306:17,  306:21  <b>size</b> [5] - 254:18,  254:20, 255:7,  260:3, 260:21  <b>skip</b> [1] - 368:9  <b>slide</b> [26] - 324:10,  325:25, 326:22,  328:4, 328:15,  328:22, 329:11,  330:6, 330:15,  331:19, 331:25,  332:4, 332:15,  333:12, 333:21,  334:25, 335:4,  336:3, 337:2,  337:17, 339:9,  342:19, 344:2,  344:17, 345:10,  345:21  <b>slide's</b> [1] - 333:13  <b>slides</b> [4] - 324:12,  327:7, 339:14,  340:17  <b>slip</b> [1] - 288:24  <b>slow</b> [2] - 321:3,  327:22</p>	<p><b>slower</b> [1] - 347:7  <b>small</b> [5] - 270:14,  304:3, 325:16,  360:21, 392:19  <b>Smith</b> [1] - 326:8  <b>smoke</b> [1] - 305:15  <b>SMTP</b> [1] - 387:8  <b>so..</b> [1] - 350:9  <b>social</b> [1] - 278:7  <b>software</b> [3] - 344:21,  345:18, 346:22  <b>someone</b> [29] -  254:15, 299:25,  306:20, 308:25,  310:3, 311:5,  311:24, 354:1,  354:3, 354:17,  354:20, 356:11,  358:10, 361:8,  364:23, 368:8,  368:12, 370:9,  371:4, 377:25,  384:2, 393:20,  393:24, 395:2,  395:10, 395:18,  395:21, 395:22  <b>something's</b> [1] -  392:10  <b>sometimes</b> [6] - 324:3,  346:7, 347:4, 353:6,  370:24, 393:2  <b>somewhat</b> [1] - 336:13  <b>sophisticated</b> [1] -  374:17  <b>sophistication</b> [3] -  385:6, 385:16,  385:17  <b>sorry</b> [12] - 259:8,  259:15, 262:17,  321:5, 322:24,  327:21, 329:8,  354:22, 355:3,  355:5, 388:11,  389:17  <b>Sorry</b> [2] - 338:14  <b>sort</b> [23] - 254:11,  256:12, 264:11,  302:1, 318:1,  321:12, 322:8,  328:11, 329:3,  331:1, 335:4, 338:5,  344:18, 347:6,  353:11, 353:13,  372:22, 379:24,  381:19, 384:20,  386:15, 392:6, 395:8  <b>sorts</b> [4] - 298:13,  298:14, 299:7,  351:20  <b>sound</b> [3] - 255:1,</p>
---	--	---	---	--

<p>388:14, 389:7</p> <p><b>soundness</b> [1] - 386:25</p> <p><b>sounds</b> [2] - 259:7, 262:14</p> <p><b>source</b> [23] - 256:19, 257:1, 267:1, 267:9, 269:1, 270:7, 313:2, 313:6, 340:12, 340:14, 342:5, 342:10, 352:25, 355:13, 355:18, 355:22, 356:3, 356:7, 356:15, 356:22, 358:16, 359:8</p> <p><b>sources</b> [1] - 353:12</p> <p><b>South</b> [1] - 343:14</p> <p><b>spam</b> [9] - 281:25, 285:17, 290:24, 300:21, 341:3, 341:11, 377:9, 377:13, 377:15</p> <p><b>spammers</b> [1] - 334:19</p> <p><b>speaking</b> [3] - 360:19, 378:12, 391:7</p> <p><b>speaks</b> [1] - 265:18</p> <p><b>SPECIAL</b> [5] - 250:14, 251:3, 251:6, 316:16, 360:4</p> <p><b>Special</b> [31] - 253:17, 253:21, 253:24, 255:12, 256:4, 257:16, 257:24, 258:4, 274:1, 274:3, 306:11, 316:7, 316:24, 317:2, 348:6, 358:4, 359:22, 360:7, 360:14, 360:15, 366:20, 367:14, 371:25, 380:11, 381:3, 381:13, 381:14, 383:18, 386:9, 389:19, 396:1</p> <p><b>special</b> [9] - 298:18, 301:6, 318:17, 319:7, 364:24, 390:6, 391:4, 391:5</p> <p><b>specialist</b> [1] - 317:17</p> <p><b>specialists</b> [3] - 320:10, 320:11, 321:19</p> <p><b>specialization</b> [2] - 317:13, 323:11</p> <p><b>specialize</b> [1] - 354:15</p> <p><b>specific</b> [8] - 264:7, 270:17, 272:21, 289:9, 392:8,</p>	<p>392:12, 392:13, 392:25</p> <p><b>specifically</b> [4] - 289:5, 306:20, 354:9, 357:3</p> <p><b>specifics</b> [2] - 265:1, 354:10</p> <p><b>spectrum</b> [1] - 374:10</p> <p><b>speculate</b> [3] - 269:4, 276:21, 383:14</p> <p><b>speech</b> [1] - 346:8</p> <p><b>speeding</b> [1] - 309:18</p> <p><b>spell</b> [2] - 316:20, 360:9</p> <p><b>spelled</b> [1] - 360:10</p> <p><b>spent</b> [7] - 259:2, 295:18, 298:7, 319:15, 360:20, 360:25, 361:1</p> <p><b>spoken</b> [1] - 321:25</p> <p><b>sponsored</b> [3] - 385:5, 385:16, 385:23</p> <p><b>spoof</b> [1] - 258:7</p> <p><b>spoofed</b> [5] - 257:12, 257:13, 257:17, 257:19, 261:3</p> <p><b>spoofing</b> [2] - 257:11, 261:21</p> <p><b>Sporre</b> [5] - 369:6, 369:7, 369:8, 369:12, 370:9</p> <p><b>spot</b> [1] - 347:17</p> <p><b>spreadsheet</b> [1] - 337:14</p> <p><b>spring</b> [1] - 300:5</p> <p><b>staff</b> [1] - 277:17</p> <p><b>stage</b> [5] - 258:12, 259:14, 275:6, 275:23, 276:1</p> <p><b>stages</b> [1] - 274:23</p> <p><b>stand</b> [2] - 339:20, 359:15</p> <p><b>standard</b> [1] - 270:13</p> <p><b>standing</b> [2] - 316:9, 359:25</p> <p><b>standpoint</b> [1] - 394:17</p> <p><b>stands</b> [5] - 277:3, 284:24, 331:15, 382:9, 385:9</p> <p><b>start</b> [9] - 259:24, 260:1, 295:6, 317:23, 325:2, 327:4, 343:13, 383:18, 383:23</p> <p><b>started</b> [12] - 285:6, 285:8, 296:6, 297:25, 325:20, 338:6, 368:20, 384:3, 384:4, 384:5,</p>	<p>384:6</p> <p><b>state</b> [4] - 360:9, 385:5, 385:16, 385:23</p> <p><b>state-sponsored</b> [3] - 385:5, 385:16, 385:23</p> <p><b>statement</b> [13] - 256:21, 258:3, 272:16, 274:25, 275:1, 278:15, 279:24, 281:4, 283:5, 291:4, 293:22, 309:19, 314:10</p> <p><b>statements</b> [5] - 271:4, 274:24, 275:2, 275:19, 279:22</p> <p><b>STATES</b> [3] - 250:1, 250:3, 250:10</p> <p><b>States</b> [7] - 250:12, 252:3, 283:4, 298:7, 316:7, 362:15, 397:11</p> <p><b>statistical</b> [2] - 261:1, 261:9</p> <p><b>statistics</b> [1] - 254:19</p> <p><b>stay</b> [3] - 342:23, 342:24, 347:15</p> <p><b>steal</b> [1] - 362:4</p> <p><b>stealing</b> [2] - 361:14, 362:2</p> <p><b>Steele</b> [24] - 262:16, 263:6, 263:12, 263:14, 264:2, 264:18, 264:24, 266:1, 266:11, 266:15, 266:20, 267:2, 267:5, 267:17, 267:19, 267:23, 267:24, 268:7, 268:17, 268:19, 269:7, 269:10, 269:12, 269:20</p> <p><b>stenographic</b> [1] - 397:5</p> <p><b>step</b> [7] - 316:8, 340:3, 344:10, 344:18, 358:14, 359:24, 396:11</p> <p><b>steps</b> [12] - 256:16, 257:6, 264:19, 290:23, 331:3, 331:4, 332:9, 352:1, 382:4, 382:19, 395:8</p> <p><b>still</b> [4] - 253:8, 301:2, 358:22, 394:20</p> <p><b>stipulation</b> [1] - 263:7</p>	<p><b>stop</b> [4] - 287:22, 324:25, 329:2, 329:16</p> <p><b>store</b> [2] - 330:7, 336:11</p> <p><b>stories</b> [1] - 283:14</p> <p><b>story</b> [34] - 281:12, 286:22, 286:24, 287:2, 287:22, 290:18, 295:14, 295:17, 295:22, 295:23, 296:1, 296:2, 296:14, 296:21, 296:23, 297:19, 301:14, 301:17, 301:19, 302:5, 302:7, 302:12, 302:16, 302:21, 302:22, 302:25, 305:2, 305:18, 372:22, 378:7, 394:19</p> <p><b>story's</b> [2] - 302:15, 303:12</p> <p><b>straggler</b> [1] - 253:9</p> <p><b>straight</b> [2] - 279:6, 335:14</p> <p><b>straightforward</b> [1] - 282:25</p> <p><b>stream</b> [1] - 347:5</p> <p><b>Street</b> [1] - 250:15</p> <p><b>strength</b> [3] - 260:3, 260:10, 260:20</p> <p><b>strengths</b> [1] - 261:10</p> <p><b>stretch</b> [1] - 359:16</p> <p><b>strictly</b> [1] - 350:6</p> <p><b>strike</b> [1] - 276:24</p> <p><b>strikes</b> [2] - 254:19, 259:3</p> <p><b>string</b> [1] - 330:11</p> <p><b>strong</b> [5] - 260:2, 269:22, 282:14, 282:15, 377:7</p> <p><b>strongly</b> [1] - 377:18</p> <p><b>Strzok</b> [5] - 368:14, 368:25, 369:1, 369:4, 370:9</p> <p><b>studied</b> [1] - 348:19</p> <p><b>stuff</b> [5] - 260:14, 294:18, 309:9, 348:10, 356:4</p> <p><b>stumble</b> [1] - 297:17</p> <p><b>Subcategories</b> [1] - 254:10</p> <p><b>subject</b> [4] - 266:13, 322:8, 349:1, 381:7</p> <p><b>subjects</b> [2] - 322:4, 322:18</p> <p><b>submit</b> [1] - 297:16</p> <p><b>subpoena</b> [4] -</p>	<p>351:19, 351:25, 352:3, 352:5</p> <p><b>subpoenas</b> [4] - 305:9, 351:6, 351:8, 352:7</p> <p><b>subscriptions</b> [1] - 321:7</p> <p><b>subsequent</b> [2] - 366:16, 390:22</p> <p><b>subset</b> [3] - 337:19, 338:8, 338:9</p> <p><b>substance</b> [1] - 340:10</p> <p><b>substantiated</b> [1] - 258:19</p> <p><b>substantive</b> [2] - 350:12, 350:15</p> <p><b>substitute</b> [1] - 271:8</p> <p><b>succeeded</b> [1] - 283:15</p> <p><b>sudden</b> [2] - 267:23, 267:24</p> <p><b>suffixes</b> [1] - 329:20</p> <p><b>suggest</b> [7] - 259:5, 266:8, 267:3, 380:8, 384:19, 385:1</p> <p><b>suggested</b> [2] - 385:6, 385:18</p> <p><b>suggesting</b> [2] - 267:1, 302:20</p> <p><b>suggestion</b> [3] - 267:14, 267:18, 269:22</p> <p><b>suggestions</b> [1] - 270:14</p> <p><b>suggests</b> [1] - 393:16</p> <p><b>summarized</b> [1] - 273:8</p> <p><b>SUMMARY</b> [1] - 382:2</p> <p><b>summary</b> [10] - 253:2, 253:4, 369:24, 370:1, 372:20, 373:7, 381:3, 381:4, 381:20</p> <p><b>summer</b> [6] - 283:19, 285:5, 290:17, 294:5, 299:5, 309:3</p> <p><b>Sunday</b> [4] - 280:5, 302:18, 304:10, 305:22</p> <p><b>supervising</b> [2] - 319:8, 319:20</p> <p><b>supervisor</b> [8] - 364:24, 365:1, 366:6, 366:19, 369:14, 372:15, 377:24, 389:19</p> <p><b>Supervisory</b> [4] - 316:24, 317:2, 360:14, 360:15</p> <p><b>supplemental</b> [1] -</p>
--	--	---	---	--

<p>253:13  <b>supplying</b> [1] - 313:15  <b>support</b> [6] - 257:14,  291:16, 297:2,  321:18, 388:19,  394:1  <b>supported</b> [1] - 378:19  <b>supporting</b> [2] -  321:14, 381:25  <b>supposed</b> [5] -  285:22, 305:2,  341:3, 347:23,  379:10  <b>supposedly</b> [4] -  281:8, 285:14,  364:2, 379:7  <b>surf</b> [1] - 285:3  <b>surprise</b> [2] - 283:11,  296:4  <b>surprising</b> [1] - 306:16  <b>suspect</b> [2] - 315:10,  393:21  <b>suspended</b> [1] - 341:9  <b>suspicious</b> [4] -  383:21, 383:22,  384:2, 384:6  <b>Sussman</b> [89] -  256:18, 256:24,  260:13, 264:2,  265:25, 266:11,  266:12, 267:22,  267:25, 269:15,  269:16, 272:18,  272:23, 273:1,  273:15, 273:22,  273:24, 281:19,  294:14, 294:23,  295:4, 295:15,  295:21, 296:5,  296:20, 296:24,  297:13, 297:21,  298:2, 298:6,  298:12, 299:6,  299:18, 299:19,  299:25, 300:3,  300:11, 300:13,  300:15, 300:18,  300:19, 300:20,  301:9, 301:16,  301:25, 302:6,  302:19, 302:24,  303:5, 303:11,  303:16, 303:19,  303:21, 303:23,  304:5, 304:17,  304:23, 305:15,  305:25, 306:24,  307:1, 307:13,  307:21, 308:10,  308:13, 308:16,</p>	<p>308:18, 308:24,  309:11, 309:15,  309:19, 309:21,  310:23, 311:8,  312:2, 312:8,  312:16, 313:3,  313:15, 313:21,  314:5, 314:11,  314:15, 356:25,  357:1, 357:8,  357:13, 357:15,  357:19  <b>Sussman's</b> [5] -  296:12, 298:5,  301:24, 310:19,  313:1  <b>SUSSMANN</b> [1] -  250:6  <b>Sussmann</b> [23] -  252:4, 272:14,  274:20, 278:25,  286:10, 293:19,  293:20, 293:22,  293:23, 295:3,  295:4, 295:18,  295:19, 297:7,  305:20, 306:8,  306:10, 308:1,  309:5, 309:22,  311:15, 313:8,  313:12  <b>sustain</b> [2] - 276:17,  276:20  <b>sustained</b> [1] - 276:24  <b>swirling</b> [1] - 294:7  <b>Sworn</b> [2] - 316:16,  360:4  <b>sworn</b> [6] - 275:21,  276:12, 289:17,  316:11, 360:1, 360:2  <b>synonymous</b> [1] -  327:3  <b>system</b> [3] - 340:25,  346:2, 361:11  <b>System</b> [4] - 284:24,  325:2, 325:11,  362:23  <b>systems</b> [3] - 362:4,  374:14</p>	<p>377:24  <b>tasked</b> [2] - 269:18,  291:16  <b>tasks</b> [2] - 371:24,  371:25  <b>Team</b> [1] - 319:16  <b>team</b> [8] - 274:2,  274:5, 274:13,  319:17, 319:23,  357:4, 357:7, 360:17  <b>Technical</b> [4] - 317:3,  318:20, 320:7,  320:24  <b>technical</b> [25] - 257:3,  319:1, 320:11,  321:19, 321:22,  322:19, 324:4,  350:6, 369:22,  372:9, 372:20,  373:8, 375:8, 376:5,  378:20, 385:5,  385:16, 385:17,  385:25, 386:10,  387:11, 391:11,  394:17, 394:18,  394:21  <b>techniques</b> [1] - 351:4  <b>technology</b> [2] -  317:14, 323:7  <b>telephone</b> [1] - 325:8  <b>ten</b> [2] - 341:21, 396:5  <b>tends</b> [1] - 337:22  <b>tens</b> [3] - 294:25,  299:1, 354:8  <b>term</b> [3] - 341:13,  365:3, 385:8  <b>terminology</b> [2] -  291:13, 382:7  <b>terms</b> [14] - 257:18,  261:9, 269:21,  270:6, 320:9,  320:20, 338:16,  339:16, 365:6,  380:14, 386:21,  386:22, 387:9,  387:17  <b>terribly</b> [1] - 255:1  <b>testified</b> [11] - 266:2,  269:17, 289:4,  306:6, 306:9, 349:7,  352:24, 373:25,  375:23, 379:13,  384:17  <b>testifies</b> [2] - 257:24,  263:9  <b>testify</b> [9] - 255:25,  256:5, 264:7, 269:6,  289:3, 312:25,  313:11, 364:11,  364:14</p>	<p><b>testifying</b> [1] - 266:16  <b>testimony</b> [34] -  253:17, 253:18,  257:10, 257:11,  259:25, 260:1,  260:18, 260:20,  260:25, 262:21,  263:5, 263:6, 263:8,  264:6, 266:24,  267:5, 268:11,  269:11, 269:13,  269:25, 275:21,  289:7, 289:17,  289:23, 290:6,  291:13, 315:16,  323:22, 324:9,  353:1, 359:12,  359:13, 371:10,  396:12  <b>text</b> [9] - 280:12,  280:16, 290:10,  296:5, 302:24,  303:3, 304:10,  305:21, 337:15  <b>texted</b> [2] - 280:7,  280:8  <b>THE</b> [111] - 250:1,  250:1, 250:10,  252:2, 252:5, 252:8,  252:13, 253:5,  253:7, 254:9,  255:23, 256:18,  257:7, 257:10,  257:17, 258:13,  258:18, 259:2,  259:15, 260:3,  260:6, 260:25,  261:15, 261:23,  262:11, 262:14,  262:16, 262:19,  262:25, 263:14,  263:25, 264:12,  264:21, 265:6,  265:15, 265:20,  266:4, 266:6, 266:8,  266:22, 267:12,  268:6, 268:22,  269:3, 269:24,  270:3, 270:9,  270:11, 270:12,  270:22, 270:25,  271:2, 274:11,  274:22, 293:14,  300:25, 315:12,  315:20, 315:21,  315:24, 316:2,  316:8, 316:12,  316:14, 316:15,  321:3, 321:5,  323:17, 323:19,</p>	<p>323:21, 324:20,  324:22, 327:22,  338:12, 348:3,  354:22, 354:24,  354:25, 355:1,  355:2, 355:3, 355:4,  355:5, 355:8,  357:25, 358:24,  359:2, 359:3, 359:5,  359:11, 359:20,  359:23, 360:3,  361:3, 361:6,  361:17, 367:11,  373:15, 375:13,  381:10, 383:9,  388:7, 388:10,  394:5, 394:8, 396:2,  396:3, 396:11,  396:16, 396:17,  396:20  <b>theirs</b> [1] - 379:23  <b>themselves</b> [3] -  274:4, 295:8, 310:9  <b>then-FBI</b> [1] - 364:20  <b>theory</b> [2] - 297:2,  312:3  <b>thereafter</b> [1] - 275:1  <b>they've</b> [3] - 297:15,  320:14, 337:19  <b>thinking</b> [3] - 281:19,  290:22, 293:20  <b>thinks</b> [1] - 275:4  <b>third</b> [11] - 275:23,  286:23, 297:10,  300:3, 309:18,  324:25, 337:24,  345:3, 345:5,  356:16, 376:21  <b>thoroughly</b> [1] -  313:17  <b>thousand</b> [1] - 341:19  <b>thousands</b> [4] - 301:3,  325:22, 335:19,  377:2  <b>threat</b> [2] - 282:2,  290:25  <b>threats</b> [1] - 382:11  <b>three</b> [11] - 254:22,  286:7, 290:4,  344:23, 345:14,  347:9, 361:1, 379:1,  383:22, 384:4, 392:1  <b>throughout</b> [6] -  253:1, 273:17,  273:25, 277:8,  319:22, 383:12  <b>throw</b> [2] - 298:21,  304:5  <b>thumb</b> [15] - 281:15,  281:17, 292:5,</p>
<b>T</b>				
<p><b>tab</b> [1] - 337:12  <b>table</b> [6] - 253:1,  253:4, 274:8,  274:20, 311:23,  356:25  <b>tandem</b> [1] - 371:24  <b>Task</b> [2] - 317:25,  318:1  <b>task</b> [2] - 282:25,</p>				

<p>292:7, 292:8, 366:1, 366:14, 366:16, 370:18, 371:11, 375:22, 381:20, 382:1, 390:8</p> <p><b>Thursday</b> <sup>[1]</sup> - 304:12</p> <p><b>tie</b> <sup>[2]</sup> - 268:2, 299:9</p> <p><b>ties</b> <sup>[3]</sup> - 265:19, 286:16, 299:8</p> <p><b>timing</b> <sup>[1]</sup> - 384:5</p> <p><b>tips</b> <sup>[1]</sup> - 305:16</p> <p><b>title</b> <sup>[2]</sup> - 317:1, 373:20</p> <p><b>TLD</b> <sup>[2]</sup> - 330:8, 331:14</p> <p><b>today</b> <sup>[10]</sup> - 256:5, 257:15, 257:25, 264:23, 269:6, 297:3, 324:10, 348:17, 349:4, 364:11</p> <p><b>together</b> <sup>[12]</sup> - 266:11, 280:19, 285:24, 300:17, 307:6, 307:17, 311:14, 362:17, 363:19, 378:10, 381:4, 389:8</p> <p><b>tomorrow</b> <sup>[1]</sup> - 269:7</p> <p><b>tongue</b> <sup>[1]</sup> - 288:24</p> <p><b>took</b> <sup>[14]</sup> - 256:17, 257:5, 264:20, 286:6, 294:14, 295:4, 295:12, 304:17, 310:22, 318:19, 345:17, 345:19, 364:19, 381:13</p> <p><b>tool</b> <sup>[2]</sup> - 278:23, 282:21</p> <p><b>tools</b> <sup>[4]</sup> - 387:12, 387:13, 392:18, 392:23</p> <p><b>top</b> <sup>[19]</sup> - 262:5, 279:7, 280:8, 286:2, 294:3, 295:11, 298:10, 298:16, 298:17, 330:9, 331:15, 339:5, 339:7, 368:21, 373:20, 381:22, 381:23, 386:5, 386:6</p> <p><b>top-line</b> <sup>[1]</sup> - 386:6</p> <p><b>topic</b> <sup>[4]</sup> - 263:1, 306:12, 323:14, 339:12</p> <p><b>topics</b> <sup>[3]</sup> - 322:2, 389:22, 389:24</p> <p><b>TOR</b> <sup>[31]</sup> - 324:14, 342:20, 342:21, 343:1, 343:17, 343:19, 343:20,</p>	<p>343:24, 344:3, 344:9, 344:14, 344:15, 344:18, 344:20, 344:21, 344:22, 345:7, 345:24, 346:2, 346:18, 346:21, 346:24, 347:7, 347:13, 347:16, 347:21, 347:23, 348:1, 384:16</p> <p><b>total</b> <sup>[3]</sup> - 335:25, 341:22, 342:16</p> <p><b>totally</b> <sup>[1]</sup> - 350:11</p> <p><b>touch</b> <sup>[1]</sup> - 286:2</p> <p><b>towards</b> <sup>[1]</sup> - 375:25</p> <p><b>towers</b> <sup>[1]</sup> - 333:5</p> <p><b>track</b> <sup>[1]</sup> - 365:9</p> <p><b>trade</b> <sup>[1]</sup> - 361:15</p> <p><b>trademarks</b> <sup>[1]</sup> - 361:15</p> <p><b>traffic</b> <sup>[20]</sup> - 254:14, 254:15, 255:19, 284:23, 285:7, 286:14, 290:1, 318:10, 318:12, 319:2, 319:4, 320:3, 321:6, 322:2, 323:14, 336:1, 344:23, 347:2, 348:14, 374:19</p> <p><b>trail</b> <sup>[2]</sup> - 284:25, 285:3</p> <p><b>training</b> <sup>[3]</sup> - 321:24, 348:23, 349:3</p> <p><b>trainings</b> <sup>[1]</sup> - 322:5</p> <p><b>trajectory</b> <sup>[1]</sup> - 255:7</p> <p><b>transactions</b> <sup>[1]</sup> - 257:22</p> <p><b>transcript</b> <sup>[3]</sup> - 278:10, 397:5, 397:6</p> <p><b>TRANSCRIPT</b> <sup>[1]</sup> - 250:9</p> <p><b>translate</b> <sup>[1]</sup> - 338:2</p> <p><b>translating</b> <sup>[1]</sup> - 363:9</p> <p><b>transmit</b> <sup>[1]</sup> - 363:11</p> <p><b>transmitted</b> <sup>[1]</sup> - 329:5</p> <p><b>transparent</b> <sup>[1]</sup> - 328:7</p> <p><b>treated</b> <sup>[1]</sup> - 301:19</p> <p><b>trial</b> <sup>[34]</sup> - 253:1, 265:24, 267:25, 269:21, 271:6, 271:9, 271:20, 272:2, 272:11, 272:24, 273:10, 273:13, 273:17, 273:25, 274:22, 276:10, 276:11, 277:9, 277:24, 277:25, 278:1, 278:4, 278:5,</p>	<p>278:10, 282:25, 300:23, 301:7, 309:13, 314:14, 314:15, 314:22, 324:6, 365:15, 383:12</p> <p><b>TRIAL</b> <sup>[1]</sup> - 250:9</p> <p><b>tried</b> <sup>[2]</sup> - 272:14, 363:18</p> <p><b>tries</b> <sup>[1]</sup> - 299:11</p> <p><b>trigger</b> <sup>[3]</sup> - 283:14, 340:17, 393:3</p> <p><b>triggered</b> <sup>[1]</sup> - 393:7</p> <p><b>trivial</b> <sup>[1]</sup> - 292:23</p> <p><b>Trojan</b> <sup>[1]</sup> - 320:19</p> <p><b>true</b> <sup>[8]</sup> - 260:10, 260:15, 267:20, 279:15, 379:12, 390:19, 397:4, 397:6</p> <p><b>truly</b> <sup>[1]</sup> - 297:23</p> <p><b>Trump</b> <sup>[40]</sup> - 281:9, 282:16, 284:8, 285:9, 285:13, 285:19, 286:15, 292:17, 294:11, 296:23, 299:16, 302:20, 302:21, 305:12, 307:5, 357:6, 364:3, 374:6, 374:13, 374:16, 376:9, 376:16, 378:1, 378:15, 379:3, 379:18, 379:19, 379:21, 380:20, 384:24, 384:25, 385:21, 386:3, 386:14, 386:16, 386:19, 386:23, 391:19</p> <p><b>trump</b> <sup>[1]</sup> - 384:14</p> <p><b>Trump's</b> <sup>[4]</sup> - 294:8, 294:12, 299:8, 299:16</p> <p><b>Trump-associated</b> <sup>[1]</sup> - 386:23</p> <p><b>trump-email.com</b> <sup>[1]</sup> - 384:14</p> <p><b>Trump/Alfa</b> <sup>[1]</sup> - 290:18</p> <p><b>trust</b> <sup>[3]</sup> - 292:24, 393:11, 394:25</p> <p><b>trusted</b> <sup>[9]</sup> - 280:22, 294:4, 294:19, 294:22, 298:16, 298:17, 299:3, 299:24, 354:3</p> <p><b>truth</b> <sup>[2]</sup> - 292:20, 292:22</p> <p><b>truthful</b> <sup>[2]</sup> - 393:18, 395:15</p>	<p><b>try</b> <sup>[7]</sup> - 262:22, 287:22, 325:22, 341:5, 351:6, 356:19, 363:2</p> <p><b>trying</b> <sup>[31]</sup> - 259:20, 259:21, 267:2, 277:18, 299:10, 299:12, 302:2, 310:3, 310:5, 310:8, 310:25, 311:5, 311:10, 311:11, 311:24, 326:8, 326:17, 329:17, 333:7, 334:18, 334:19, 336:1, 341:4, 347:19, 349:9, 362:3, 362:14, 376:7, 388:15</p> <p><b>Tuesday</b> <sup>[1]</sup> - 250:4</p> <p><b>turn</b> <sup>[1]</sup> - 297:17</p> <p><b>turned</b> <sup>[1]</sup> - 337:13</p> <p><b>turning</b> <sup>[1]</sup> - 346:24</p> <p><b>turns</b> <sup>[1]</sup> - 314:16</p> <p><b>tutorial</b> <sup>[1]</sup> - 324:10</p> <p><b>two</b> <sup>[42]</sup> - 257:22, 257:23, 262:3, 266:20, 266:25, 268:14, 269:5, 269:17, 271:7, 271:24, 272:21, 279:17, 281:15, 282:9, 283:9, 283:17, 285:24, 286:5, 287:7, 291:5, 292:2, 292:5, 292:6, 292:7, 292:8, 294:2, 298:1, 299:24, 302:23, 304:23, 323:24, 334:5, 340:1, 340:7, 348:1, 363:10, 369:22, 371:24, 372:19, 378:21, 384:3, 391:5</p> <p><b>two-and-a-half-page</b> <sup>[1]</sup> - 262:3</p> <p><b>type</b> <sup>[2]</sup> - 330:12, 337:12</p> <p><b>type-separated</b> <sup>[1]</sup> - 337:12</p> <p><b>typed</b> <sup>[1]</sup> - 329:2</p> <p><b>types</b> <sup>[6]</sup> - 290:4, 323:25, 328:5, 361:8, 362:5, 391:21</p> <p><b>typically</b> <sup>[2]</sup> - 358:15, 371:3</p>	<p>323:8, 352:9, 354:7, 395:11</p> <p><b>ultimate</b> <sup>[5]</sup> - 255:5, 259:22, 276:14, 389:5, 389:9</p> <p><b>ultimately</b> <sup>[7]</sup> - 255:8, 258:13, 258:15, 284:9, 290:24, 297:21, 305:13</p> <p><b>unable</b> <sup>[1]</sup> - 256:1</p> <p><b>unauthorized</b> <sup>[1]</sup> - 361:9</p> <p><b>uncomfortable</b> <sup>[1]</sup> - 278:2</p> <p><b>unconnected</b> <sup>[1]</sup> - 253:22</p> <p><b>uncontestable</b> <sup>[1]</sup> - 260:15</p> <p><b>uncontroversial</b> <sup>[2]</sup> - 260:7, 260:8</p> <p><b>undated</b> <sup>[1]</sup> - 266:25</p> <p><b>under</b> <sup>[7]</sup> - 283:4, 289:3, 289:4, 298:8, 306:7, 306:9, 374:3</p> <p><b>underlying</b> <sup>[1]</sup> - 375:1</p> <p><b>undermined</b> <sup>[1]</sup> - 257:13</p> <p><b>underneath</b> <sup>[1]</sup> - 336:15</p> <p><b>understood</b> <sup>[3]</sup> - 255:10, 259:9, 367:25</p> <p><b>unfamiliar</b> <sup>[1]</sup> - 362:22</p> <p><b>unfolded</b> <sup>[1]</sup> - 258:2</p> <p><b>UNISON</b> <sup>[2]</sup> - 271:1, 293:17</p> <p><b>unit</b> <sup>[7]</sup> - 317:1, 319:21, 319:23, 320:23, 321:17, 382:8, 382:9</p> <p><b>Unit</b> <sup>[4]</sup> - 317:3, 318:21, 320:8, 320:24</p> <p><b>UNITED</b> <sup>[3]</sup> - 250:1, 250:3, 250:10</p> <p><b>United</b> <sup>[7]</sup> - 250:12, 252:3, 283:4, 298:7, 316:6, 362:15, 397:11</p> <p><b>units</b> <sup>[1]</sup> - 361:20</p> <p><b>universe</b> <sup>[1]</sup> - 254:18</p> <p><b>universities</b> <sup>[1]</sup> - 325:15</p> <p><b>University</b> <sup>[1]</sup> - 317:11</p> <p><b>unless</b> <sup>[3]</sup> - 259:13, 273:17, 396:15</p> <p><b>unlike</b> <sup>[1]</sup> - 310:20</p> <p><b>unnamed</b> <sup>[1]</sup> - 289:16</p> <p><b>unquote</b> <sup>[1]</sup> - 280:14</p> <p><b>unrelated</b> <sup>[1]</sup> - 267:4</p>
				<b>U</b>
				<p><b>U.K</b> <sup>[1]</sup> - 343:14</p> <p><b>U.S</b> <sup>[5]</sup> - 250:23,</p>

<p><b>unusual</b> <sup>[1]</sup> - 335:15  <b>unusually</b> <sup>[3]</sup> - 374:6, 374:9, 376:16  <b>unusually-configured</b> <sup>[1]</sup> - 376:16  <b>up</b> <sup>[86]</sup> - 252:6, 253:25, 256:10, 258:9, 266:19, 268:2, 271:16, 271:23, 278:4, 283:20, 284:6, 285:1, 288:17, 295:25, 299:1, 299:12, 301:24, 302:25, 306:13, 309:18, 309:19, 310:24, 311:8, 311:17, 316:8, 325:23, 326:25, 327:2, 328:11, 329:17, 331:7, 332:7, 333:19, 333:20, 334:7, 334:25, 335:4, 336:20, 337:3, 337:4, 337:7, 337:24, 339:15, 339:17, 339:22, 340:2, 340:3, 340:4, 340:5, 340:8, 340:9, 340:11, 340:16, 340:18, 340:21, 341:1, 341:5, 341:10, 342:4, 343:13, 343:24, 345:24, 346:18, 347:12, 349:8, 349:16, 349:17, 349:18, 350:1, 350:7, 350:8, 350:11, 350:14, 357:18, 359:15, 359:24, 380:22, 381:14, 387:12, 387:20, 392:17  <b>upper</b> <sup>[1]</sup> - 367:17  <b>ups</b> <sup>[6]</sup> - 253:19, 257:22, 299:9, 331:2, 333:25, 342:2  <b>urgency</b> <sup>[1]</sup> - 287:1  <b>urgent</b> <sup>[1]</sup> - 280:21  <b>useful</b> <sup>[2]</sup> - 271:15, 353:12  <b>user</b> <sup>[7]</sup> - 327:9, 327:17, 329:6, 331:24, 332:25, 333:10, 337:10  <b>user's</b> <sup>[1]</sup> - 339:2  <b>usual</b> <sup>[1]</sup> - 253:10</p>	<p><b>utilities</b> <sup>[1]</sup> - 340:20</p> <p><b>V</b></p> <p><b>V3</b> <sup>[1]</sup> - 373:22  <b>valuable</b> <sup>[2]</sup> - 353:10, 353:15  <b>value</b> <sup>[2]</sup> - 337:12, 353:16  <b>variety</b> <sup>[2]</sup> - 346:14, 362:15  <b>various</b> <sup>[7]</sup> - 256:11, 284:22, 318:14, 322:2, 348:25, 389:24, 392:4  <b>vast</b> <sup>[1]</sup> - 284:22  <b>verdict</b> <sup>[1]</sup> - 293:11  <b>Verizon</b> <sup>[4]</sup> - 327:21, 328:1, 328:24, 329:4  <b>version</b> <sup>[1]</sup> - 264:1  <b>vet</b> <sup>[2]</sup> - 266:1, 266:9  <b>victim</b> <sup>[3]</sup> - 287:11, 356:11, 356:17  <b>Video</b> <sup>[1]</sup> - 303:25  <b>view</b> <sup>[2]</sup> - 256:23, 387:1  <b>viewed</b> <sup>[1]</sup> - 287:15  <b>views</b> <sup>[5]</sup> - 264:19, 282:23, 389:14, 389:21, 389:24  <b>violation</b> <sup>[1]</sup> - 361:15  <b>violations</b> <sup>[1]</sup> - 361:14  <b>Virginia</b> <sup>[3]</sup> - 318:23, 343:13, 363:22  <b>virus</b> <sup>[2]</sup> - 320:18, 320:19  <b>viruses</b> <sup>[1]</sup> - 320:16  <b>visibility</b> <sup>[18]</sup> - 255:6, 255:13, 255:17, 256:13, 256:15, 256:16, 258:23, 341:13, 341:22, 341:23, 342:11, 342:17, 352:24, 353:13, 355:16, 355:24, 356:2, 356:20  <b>visit</b> <sup>[1]</sup> - 328:3  <b>visiting</b> <sup>[2]</sup> - 343:10, 346:4  <b>visual</b> <sup>[1]</sup> - 336:16  <b>Vladimir</b> <sup>[1]</sup> - 294:13  <b>vocab</b> <sup>[1]</sup> - 341:13  <b>volume</b> <sup>[1]</sup> - 260:11  <b>voluntarily</b> <sup>[1]</sup> - 371:5  <b>volunteers</b> <sup>[1]</sup> - 343:4  <b>vs</b> <sup>[2]</sup> - 250:5, 252:4</p>	<p><b>W</b></p> <p><b>wager</b> <sup>[1]</sup> - 387:10  <b>walk</b> <sup>[9]</sup> - 292:14, 297:3, 297:22, 298:18, 317:21, 326:24, 335:1, 349:5, 396:6  <b>walked</b> <sup>[2]</sup> - 279:4, 288:5  <b>walking</b> <sup>[2]</sup> - 313:3, 327:4  <b>wants</b> <sup>[2]</sup> - 253:12, 303:3  <b>warrant</b> <sup>[11]</sup> - 351:2, 351:19, 352:3, 352:19, 352:20, 352:21, 352:22, 352:23, 358:15, 358:18, 392:21  <b>warrants</b> <sup>[3]</sup> - 352:14, 352:16, 358:5  <b>was..</b> <sup>[1]</sup> - 355:6  <b>Washington</b> <sup>[4]</sup> - 250:15, 250:24, 363:24, 397:13  <b>WATKINS</b> <sup>[1]</sup> - 250:19  <b>ways</b> <sup>[2]</sup> - 352:4, 387:11  <b>weakness</b> <sup>[1]</sup> - 261:10  <b>web</b> <sup>[11]</sup> - 326:15, 332:5, 332:13, 332:16, 332:18, 332:19, 332:21, 333:1, 344:19  <b>website</b> <sup>[12]</sup> - 326:15, 343:6, 343:10, 344:11, 345:12, 345:13, 345:16, 349:19, 363:5, 363:8, 363:10, 369:23  <b>Wednesday</b> <sup>[1]</sup> - 304:11  <b>week</b> <sup>[4]</sup> - 303:16, 304:9, 305:23, 311:6  <b>weeks</b> <sup>[7]</sup> - 267:10, 271:7, 274:23, 277:13, 287:17, 383:22, 384:4  <b>weigh</b> <sup>[1]</sup> - 276:14  <b>weird</b> <sup>[4]</sup> - 260:24, 294:12, 299:9, 299:15  <b>welcome</b> <sup>[2]</sup> - 252:14, 316:2  <b>well-connected</b> <sup>[1]</sup> - 278:18  <b>whatsoever</b> <sup>[1]</sup> - 306:7  <b>whereas</b> <sup>[1]</sup> - 392:22</p>	<p><b>White</b> <sup>[2]</sup> - 265:15, 373:22  <b>white</b> <sup>[5]</sup> - 281:16, 290:13, 292:8, 307:11, 381:25  <b>whole</b> <sup>[3]</sup> - 296:6, 298:20, 346:14  <b>wholly</b> <sup>[1]</sup> - 265:23  <b>wide</b> <sup>[4]</sup> - 322:18, 361:25, 362:5, 389:21  <b>widely</b> <sup>[1]</sup> - 325:20  <b>willfully</b> <sup>[2]</sup> - 272:15, 279:23  <b>willing</b> <sup>[5]</sup> - 370:19, 380:2, 380:3, 380:7  <b>win</b> <sup>[1]</sup> - 285:23  <b>wind</b> <sup>[1]</sup> - 271:23  <b>winning</b> <sup>[2]</sup> - 295:13, 302:8  <b>wire</b> <sup>[1]</sup> - 332:3  <b>wires</b> <sup>[1]</sup> - 327:14  <b>withdraw</b> <sup>[1]</sup> - 355:9  <b>withdrawn</b> <sup>[1]</sup> - 276:21  <b>witness</b> <sup>[18]</sup> - 252:21, 252:23, 253:2, 253:4, 266:14, 275:9, 276:23, 277:1, 277:3, 290:5, 314:22, 314:24, 315:16, 316:4, 316:11, 356:10, 356:17, 360:2  <b>WITNESS</b> <sup>[12]</sup> - 251:2, 316:14, 321:5, 348:3, 354:24, 355:1, 355:3, 355:5, 359:2, 359:5, 361:6, 396:2  <b>witness's</b> <sup>[2]</sup> - 276:22, 291:13  <b>witnesses</b> <sup>[12]</sup> - 275:8, 275:21, 276:16, 289:23, 291:2, 304:15, 305:10, 312:24, 323:25, 324:1, 324:2, 324:3  <b>wonder</b> <sup>[1]</sup> - 339:2  <b>wonderful</b> <sup>[1]</sup> - 262:15  <b>word</b> <sup>[2]</sup> - 258:7, 386:16  <b>words</b> <sup>[12]</sup> - 254:10, 255:18, 258:24, 262:5, 265:11, 280:17, 289:10, 311:24, 368:5, 383:4, 387:1, 387:8  <b>Workbook</b> <sup>[1]</sup> - 339:6  <b>works</b> <sup>[7]</sup> - 301:22,</p>	<p>325:6, 325:7, 335:24, 343:16, 344:9, 349:5  <b>world</b> <sup>[15]</sup> - 254:15, 299:7, 304:3, 319:18, 322:23, 323:1, 323:2, 327:12, 327:16, 329:16, 331:4, 335:17, 335:20, 336:1, 353:4  <b>world's</b> <sup>[3]</sup> - 294:17, 298:24  <b>worry</b> <sup>[2]</sup> - 271:20, 305:14  <b>worthwhile</b> <sup>[1]</sup> - 262:2  <b>write</b> <sup>[10]</sup> - 269:18, 271:17, 271:21, 280:12, 295:14, 303:8, 338:18, 370:21, 371:6, 381:14  <b>writer</b> <sup>[1]</sup> - 387:22  <b>writers</b> <sup>[1]</sup> - 387:22  <b>writing</b> <sup>[1]</sup> - 290:9  <b>written</b> <sup>[1]</sup> - 378:18  <b>wrote</b> <sup>[7]</sup> - 258:9, 292:3, 309:6, 311:2, 369:25, 379:17, 389:6  <b>www.Google.com</b> <sup>[2]</sup> - 331:23, 332:12</p> <p><b>X</b></p> <p><b>XYZ</b> <sup>[1]</sup> - 363:6  <b>XYZ.com</b> <sup>[2]</sup> - 363:5, 363:8</p> <p><b>Y</b></p> <p><b>Yahoo</b> <sup>[4]</sup> - 334:2, 336:6, 336:20  <b>Yahoo's</b> <sup>[1]</sup> - 339:3  <b>Yahoo.com</b> <sup>[2]</sup> - 325:5, 326:20  <b>Yao</b> <sup>[1]</sup> - 274:19  <b>YAO</b> <sup>[1]</sup> - 250:18  <b>year</b> <sup>[3]</sup> - 284:20, 287:9, 338:24  <b>years</b> <sup>[12]</sup> - 280:19, 284:2, 298:7, 298:11, 299:25, 306:17, 306:21, 317:5, 317:21, 319:15, 360:20, 361:1  <b>yesterday</b> <sup>[6]</sup> - 252:15, 271:22, 272:12, 274:4, 274:17, 306:20</p>
---	---	---	---	---

**York** <sup>[6]</sup> - 250:20,  
286:21, 295:13,  
302:7, 302:22, 305:1  
**yourself** <sup>[2]</sup> - 316:20,  
366:2  
**yourselves** <sup>[6]</sup> - 272:9,  
280:16, 304:4,  
304:19, 309:22,  
310:2  
**YouTube** <sup>[1]</sup> - 326:20

**Z**

**zero** <sup>[2]</sup> - 313:12,  
313:20