

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE NORTHERN DISTRICT OF GEORGIA
3 ATLANTA DIVISION

4 DONNA CURLING, ET AL., :
5 :
6 PLAINTIFFS, :
7 vs. : DOCKET NUMBER
8 : 1:17-CV-2989-AT
9 BRAD RAFFENSPERGER, ET AL., :
10 :
11 DEFENDANTS. :

12 **TRANSCRIPT OF HEARING ON PRELIMINARY INJUNCTION PROCEEDINGS**
13 **BEFORE THE HONORABLE AMY TOTENBERG**
14 **UNITED STATES DISTRICT JUDGE**

15 **JULY 25, 2019**

16 **10:10 A.M.**

17 **VOLUME 1 OF 2**

18 ***MECHANICAL STENOGRAPHY OF PROCEEDINGS AND COMPUTER-AIDED***

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I N D E X T O P R O C E E D I N G S

<u>WITNESS</u>	<u>PAGE</u>
SANFORD MERRITT BEAVER	
Cross-Examination by Mr. Cross	21
Cross-Examination by Mr. Brown	49
Direct Examination by Mr. Russo	54
Recross-Examination by Mr. Cross	61
Examination by The Court	63
MICHAEL LEON BARNES	
Cross-Examination by Ms. Bentrrott	73
Cross-Examination by Mr. Brown	81
Direct Examination by Mr. Russo	96
Examination by The Court	105
Recross-Examination by Ms. Bentrrott	106
TERI ADAMS	
Direct Examination by Mr. Brody	109
Cross-Examination by Mr. Lake	111
AMBER MCREYNOLDS	
Direct Examination by Mr. Brown	116
Voir Dire Examination by Mr. Belinfante	120
Direct Examination (Continued) by Mr. Brown	124
Cross-Examination by Mr. Belinfante	138

1	(...cont'd...)	
2	<u>WITNESS</u>	<u>PAGE</u>
3	Cross-Examination	
4	by Ms. Burwell	147
5	Redirect Examination	
6	by Mr. Brown	157
7	Recross-Examination	
8	by Mr. Belinfante	159
9	MICHAEL LEON BARNES	
10	Reexamination	
11	by The Court	161
12	Redirect Examination	
13	by Mr. Russo	172
14	Recross-Examination (Further)	
15	by Mr. Brown	172
16	Reexamination (Further)	
17	by The Court	173
18	Recross-Examination (Further)	
19	by Mr. Brown	174
20	JASMINE CLARK	
21	Direct Examination	
22	by Mr. Powers	175
23	Cross-Examination	
24	by Mr. Lake	182
25	SARA LECLERC	
26	Direct Examination	
27	by Mr. Brown	190
28	Cross-Examination	
29	by Mr. Lake	194
30	KATHY POLATTIE	
31	Direct Examination	
32	by Mr. Powers	196
33	Cross-Examination	
34	by Mr. Lake	199
35	THERESA PAYTON	
36	Cross-Examination	
37	by Mr. Cross	205

1 (...cont'd...)

2	<u>WITNESS</u>	<u>PAGE</u>
3	Direct Examination	
	by Mr. Tyson	238
4	Recross-Examination	
	by Mr. Cross	273
5	Redirect Examination	
	by Mr. Tyson	280
6	Examination	
	by The Court	283
7	Recross-Examination (Further)	
	by Mr. Cross	292
8	Redirect Examination (Further)	
	by Mr. Tyson	294
9		
10	MICHAEL SHAMOS, PH.D. (Videotaped Deposition)	303
	* * *	
11		
12	CERTIFICATE	313

13
14
15
16
17
18
19
20
21
22
23
24
25

P R O C E E D I N G S

(Atlanta, Fulton County, Georgia; July 25, 2019.)

THE COURT: Good morning. Please have a seat.

Counsel and ladies and gentlemen, we're here in the matter of Donna Curling, et al., vs. Brad Kemp, Civil Action Number 1:17-CV-2989.

I know that this hearing is one of public interest. I would ask the audience though to try to limit your sounds or reactions. It is not -- it doesn't help us, and we're not in a political event.

And on that note, I wanted to say that I understood that one or more individuals were distributing a leaflet about election systems. And that is absolutely, you know, permissible, totally authorized outside the court. And I understand it is a traditional forum for distributing literature and rallying on the courthouse steps.

But please don't do this -- use the courtroom or the halls for that purpose. We have a different function. And I appreciate that.

We have a lot of counsel here. And I understand that because of the volume of counsel that Fulton County counsel is sitting in the front row back there. Hello. And if there is some discomfort at some point, we'll try to figure out maybe a better adjustment. But I'm not sure we're going to have one. But I appreciate your flexibility in sitting there. And I'm

1 sure your other defense counsel will assist if you need to get
2 up to access a computer.

3 I have a listing here of everyone who is present.
4 And so for purposes of just proceeding, I want to just make
5 sure that the court reporter has everyone's names.

6 COURT REPORTER: Yes, ma'am.

7 THE COURT: It would be helpful for me to know though
8 who though -- I understand that there will be a variety of
9 counsel asking questions over time. Tell me who is going to be
10 the lead counsel for the Curling plaintiffs.

11 MR. CROSS: I will, Your Honor. David Cross of
12 Morrison & Foerster.

13 THE COURT: Who is going to be lead counsel in
14 speaking for the Coalition plaintiffs?

15 MR. BROWN: I will, Your Honor. Bruce Brown.

16 THE COURT: And for the state defendants, who is
17 going to be the lead counsel?

18 MR. RUSSO: Your Honor, Vincent Russo. And I will be
19 the lead counsel today.

20 THE COURT: And for Fulton County?

21 MS. BURWELL: Kaye Burwell, Your Honor.

22 THE COURT: Okay. So everyone on the left side of
23 the room at the tables are representing the state; is that
24 right?

25 MR. RUSSO: Yes, Your Honor.

1 THE COURT: We're just propagating. All right. Very
2 good.

3 Counsel have proposed a framework here that there
4 would be a defined period of time for each witness and if there
5 is extra time it can be moved into another witness, as I
6 understand the system that you have all negotiated.

7 Is it something like that or at the end?

8 MR. CROSS: Yes, Your Honor. Essentially what we
9 agreed to was that we would try to split the overall time 50/50
10 by side. And then each side can use their time however they
11 want in terms of opening, closing, direct, and cross. But that
12 way it is equitable in trying to move efficiently.

13 THE COURT: All right. And I know the plaintiffs put
14 forth a number of -- for example, 60 minutes for Dr. Halderman,
15 and you anticipated then that you would also allocate 60
16 minutes for the defendant. Or is that 30 and 30? I wanted to
17 just make sure.

18 MR. CROSS: Right. So what we did, Your Honor, was
19 to put only our own examination times because we figured they
20 would figure those out. I can tell you Dr. Halderman is more
21 like half an hour. So these things have gotten cut back a bit.
22 But it is only what we expect for our --

23 THE COURT: So you are basically saying if you spend
24 20 minutes they could spend 20 minutes?

25 MR. CROSS: What I'm saying is: We spend 20 minutes,

1 they could spend 2 hours if they want, but that comes out of
2 their entire aggregate time. Once you are out of time, you are
3 out of time.

4 For like Barron, for example, we're only going to
5 cross-examine Mr. Barron. So whatever time we use for that
6 comes out of our total time.

7 Does that make sense?

8 THE COURT: So you are going to cross-examine him
9 after he is called as a witness?

10 MR. CROSS: That's right. I confirmed with Ms.
11 Burwell that they are definitely calling him. So we'll just
12 wait and cross-examine him.

13 THE COURT: And there were a number of other people
14 like that that you had listed. Mr. Barnes, for instance. Are
15 you going to call him, or are you going to just cross-examine
16 him?

17 MR. CROSS: Mr. Beaver and Mr. Barnes we will call in
18 our own case.

19 THE COURT: And so what will happen when they call --
20 will you still -- you are still retaining the right to
21 cross-examine them?

22 MR. CROSS: If we do that. What we did last time was
23 both sides just did all their examination at once. I don't
24 have a problem with that. I'm not going to argue that their
25 examination of Mr. Beaver is limited to my examination. It

1 would seem more efficient to just get witnesses on and off.

2 So --

3 THE COURT: All right. Well, I guess you can
4 determine based on the questions whether you want to do that or
5 not.

6 MR. RUSSO: That is fine, Your Honor. That seems
7 like a reasonable approach.

8 THE COURT: All right. I'm just a little bit -- did
9 you have a total number of hours or am I just supposed to add
10 all this together that you are anticipating?

11 MR. CROSS: Right. So the math that I had in mind
12 when Mr. Russo and I talked about this was -- I think we
13 figured somewhere between five hours of standup time in the
14 court given the hours you have set aside.

15 THE COURT: Today?

16 MR. CROSS: Each day.

17 THE COURT: Each day.

18 MR. CROSS: If we do two full days. So roughly five
19 hours per side was the idea. We have folks on our side that
20 will help -- that will track time so Your Honor doesn't have to
21 do that.

22 THE COURT: All right. So I guess we'll still try
23 to. And I won't take the time I'm consuming right now against
24 anyone.

25 We have some issues about the sufficiency of the

1 number of seats here. And I just want to say that if you do
2 plan to -- if there is anyone who happens to be of a group you
3 might want to be able to circulate people at some point and
4 allow different people to sit. I don't mean to be saying that
5 every 15 minutes or anything else like that as in the Supreme
6 Court. That would be highly distracting. But the extra
7 overflow room as before will have audio though. It does not
8 have visual. And one day we will have -- be able to have
9 proceedings in there if we are graced by technology.

10 All right. I think I understand this now. Who will
11 be timekeeping for you-all just simply in case we fall back on
12 our --

13 MR. CROSS: We have two individuals, Ms. Conaway, a
14 paralegal, and Reema, one of my colleagues, one of my
15 associates.

16 THE COURT: Are you going to be doing it also
17 relative to the defendants' time?

18 MR. CROSS: Yes, Your Honor. They'll calculate for
19 each of the four groups.

20 THE COURT: Is anyone doing it for your time, or do
21 you want to just rely on what they are doing?

22 MR. RUSSO: I'm fine. I'll rely on their person.

23 THE COURT: All right.

24 MR. CROSS: Your Honor, I have been informed that the
25 defense is totally out of time.

1 THE COURT: Very good. I'm sure that he will stand
2 up later on and say that too. And maybe I will too to
3 everybody.

4 Okay. A few other housekeeping matters. There's
5 some issues about confidentiality of documents. And it is hard
6 for me to completely understand how that is going to bleed
7 over, especially in the testimony of Dr. Halderman or Bernhard
8 or any of the other experts.

9 And even if I -- even if I am to agree with the state
10 that the documents at issue are confidential, I think it would
11 be -- we would be hard-pressed to be able to reasonably have a
12 public hearing and not have matters of great public import and
13 interest and not at least allow the expert to discuss these
14 issues.

15 Now, if there is something that is particularly
16 structural that you think that Dr. Halderman is getting into,
17 you can flag that and explain that and come to the bench. But
18 it is -- I think it would be highly disruptive of the testimony
19 if we are jumping up and down on this. So unless there is
20 something that is absolutely like a heartthrob to you of the
21 greatest variety, i.e., heart attack level, I would say don't
22 do that.

23 I don't think -- I can't imagine we're going to get
24 to the level of structure that would be such that it would
25 expose something to the state -- of the state's that would make

1 the state vulnerable. On the other hand, to discuss
2 vulnerabilities as a whole, that is what we have been doing.
3 And he can fully testify about that. If we have to get into
4 something that you can persuade me that is really so technical
5 and structural that somebody picking up the transcript would
6 make a remark about and be able to exploit it, then we'll have
7 to just basically put a tag on that potentially and -- and deal
8 with it later in the day.

9 MR. CROSS: Your Honor, one flag on that. The first
10 witness we plan to call is Merritt Beaver. He will implicate
11 some of this, both of the issues that have been briefed before
12 Your Honor. I'm happy to just walk through the cross. And if
13 they want to object as you suggested -- but I wanted to raise
14 that in case there is something that should be dealt with
15 beforehand.

16 THE COURT: All right. Are there any other
17 preliminary matters that we have to deal with?

18 MR. CROSS: I think two, Your Honor. One, we have
19 invoked Rule 615 -- Mr. Russo and I spoke to that -- as to fact
20 witnesses. So experts will remain. I think they have a
21 single -- actually who is your client rep?

22 MR. RUSSO: Our client is going to be Mr. Barnes.

23 MR. CROSS: So they have one client rep. So I wanted
24 to alert the Court to that.

25 The other was: Did Your Honor reach a decision on

1 Dr. Shamos, or is that still being considered?

2 THE COURT: My view about Dr. Shamos is this -- is
3 that I haven't seen the many hour deposition. I don't know all
4 that was discussed there. I have read his quite detailed
5 affidavit. And he addresses line-by-line, it feels like, at
6 points the work and affidavits of the plaintiffs' experts. To
7 me, his affidavit fully addresses that.

8 Now, if there is something in particular in the
9 testimony that is new that arises today that he wasn't given an
10 opportunity to address, then I would consider allowing him to
11 testify as a rebuttal matter on that. But if it is not new, if
12 it is encompassed within essentially the affidavit he gave and
13 the testimony he gave in response to the issues as he has been
14 presented to it, then I think that that would be redundant and
15 not necessary.

16 MR. CROSS: Thank you, Your Honor.

17 MR. RUSSO: Your Honor, we just want to point out
18 that Dr. Shamos' declaration was addressed in the reply briefs
19 that plaintiffs filed. He never had a chance to rebut those
20 declarations that were in the reply brief. It may not be
21 necessary, of course, to call him based on what you are saying.
22 But we did want to point that out.

23 MR. CROSS: Your Honor, only briefly. The reply
24 brief was filed, I think, on the 18th. We deposed him on the
25 19th. He was deposed after the reply briefing was done. So

1 Your Honor's ruling is fine. I just didn't want to allow that
2 to stand on the record --

3 THE COURT: I understood that the reply brief was
4 filed the day beforehand.

5 MR. RUSSO: We filed our response, of course, on the
6 10th.

7 THE COURT: Right. But you didn't basically file
8 anything to say we need to be able to file something in
9 response to that from him and I do know -- or seek the
10 permission to do that either. So that is -- that is the way I
11 view it at this juncture. And, you know, you can track
12 whatever the issues are you think that might arise and
13 specifically tell me about them at the end.

14 But I can't -- further than that, I would need to
15 know specifically what he was going to address that was -- that
16 came as a totally new matter.

17 All right. So we're not going to have any opening
18 argument. And you briefed this a great deal. If there is
19 something that I need to hear on closing argument, we'll deal
20 with that tomorrow.

21 Anything else? Just for our own purposes, even
22 though I know -- yes. I'm sorry.

23 MR. RUSSO: I was waiting to see if they were going
24 to go first. Your Honor, we just wanted to make a note that we
25 do have an objection to the use of Joseph Kirk's deposition

1 transcript -- the filing of it that plaintiffs made. Mr. Kirk
2 is the Barrow County -- excuse me -- Bartow County election
3 superintendent. They took his deposition. It ended without
4 any rebuttal -- without any cross-examination to be possible.
5 We would be happy to point out areas of the transcript for you
6 to consider. But we do object to them filing it without the
7 conclusion of that deposition.

8 THE COURT: Without -- I'm sorry?

9 MR. RUSSO: That deposition concluding without the
10 defendants being able to cross-examine Mr. Kirk.

11 THE COURT: Was a representative of the state
12 present?

13 MR. RUSSO: We were present, yes, Your Honor. The
14 deposition took seven hours on the plaintiffs' side. And the
15 county attorney concluded it without any cross.

16 THE COURT: Okay. And you didn't seek permission to
17 be able to continue?

18 MR. RUSSO: I'll defer to my colleague here who was
19 at the deposition.

20 MR. MILLER: Your Honor, Carey Miller for the state
21 defendants. The situation surrounding this is that plaintiffs
22 noticed the deposition at the Bartow County Courthouse, which,
23 of course, was scheduled to close at 5:00. At the point in
24 time we were at about five and a half hours on the record,
25 probably about seven to eight in total time, both the state

1 defendants and Fulton defendants objected to the deposition
2 itself for the reason that we were not able to cross-examine.
3 At that time, the Coalition plaintiffs' attorney who was
4 conducting the deposition indicated that he intended to
5 continue the deposition. And, of course, counsel for the
6 election supervisor also indicated that he was going to object
7 to continuing the deposition to the extent that it violates the
8 Federal Rules of Civil Procedure being a deposition that lasts
9 for more than a day.

10 Frankly, we were in a situation where this was after
11 our brief was filed. The deposition had obviously not
12 concluded. We anticipated it would be continued at some point
13 and then only to see a few days later that deposition being
14 relied upon in the reply brief.

15 What we would suggest to the Court is that if we
16 could perhaps read in a few lines of the deposition. Of
17 course, these would all be questions that were posed by
18 plaintiffs' counsel, given that we did not have that
19 opportunity to pose questions. And, again, we did object on
20 the record as to this matter.

21 THE COURT: All right. So what you want to do is now
22 read in some of the matters that they didn't include? Is
23 that --

24 MR. MILLER: No, Your Honor. It would be reading in
25 questions that, frankly, were questions from plaintiffs'

1 counsel and reading in Mr. Kirk's answers to those. But the
2 fact is that we had no opportunity to use any portion of the
3 deposition nor to cross-examine him at all.

4 THE COURT: All right. But are you asking now -- I
5 mean, if you just want to provide other portions of the
6 deposition, of course, you are welcome to do that and to just
7 submit them rather than use these hours to do that.

8 I understand your point. I still -- given the
9 frequency with which everyone was contacting me, frankly, in
10 the last two weeks, it is hard to know if it was that
11 significant why somebody didn't from the state say, and we have
12 this problem, because I was hearing about every other problem
13 in the book.

14 MR. MILLER: Your Honor, to be clear, we raised the
15 issue with counsel. We wanted to confer about it. But,
16 frankly, we had so many other things going on.

17 THE COURT: All right. And I understand. But you
18 are welcome anyway -- if there are additional pages of the
19 deposition you want to submit, you are welcome to do so.

20 If Mr. -- if the witness is coming -- but I didn't
21 hear he was coming -- then you're welcome to cross-examine him
22 then. All right.

23 All right. I still think just for my own purposes so
24 I understand, Mr. Martin, how we're proceeding, would you still
25 use our stop clock as well so we can just simply get -- I can

1 have a sense of how long things are. And we'll just -- I mean,
2 it is not digital. So it is a little harder to track than a
3 digital clock. But basically when Mr. Martin starts it, you'll
4 start seeing it move.

5 And which one is the second hand? I can't remember.

6 COURTROOM DEPUTY CLERK: The red one is the second
7 hand.

8 THE COURT: The red one is the second hand, and then
9 he will stop it when -- and start it again when the
10 cross-examination begins. But you're welcome to continue
11 using -- it is great to have another timekeeper as well.

12 All right. Then I gather we're ready to begin; is
13 that right?

14 MR. CROSS: Yes, Your Honor.

15 THE COURT: All right.

16 MR. BROWN: Yes, Your Honor.

17 THE COURT: Call your -- plaintiffs, call your first
18 witness.

19 MR. CROSS: We were going to do brief opening
20 statements if that is okay with the Court.

21 THE COURT: What is brief?

22 MR. CROSS: For us, it is ten minutes or less.

23 THE COURT: Why do I need opening -- I don't want to
24 spend more time discussing it than it is worth. But why do I
25 need it? I have now read thousands of pages.

1 MR. CROSS: We could move right to witnesses if that
2 is what --

3 THE COURT: What? Let's just start with the
4 witnesses.

5 MR. CROSS: Thank you, Your Honor. All right. We --
6 the plaintiffs will -- the plaintiffs will call our first
7 witness, Merritt Beaver.

8 THE COURT: I will just be clear that only when you
9 ask your first question am I going to start running time so
10 that we can have the same notion of how we're proceeding here.

11 MR. CROSS: Thank you, Your Honor.

12 COURTROOM DEPUTY CLERK: Please raise your right
13 hand.

14 **(Witness sworn)**

15 COURTROOM DEPUTY CLERK: Please have a seat. Loudly
16 and clearly state your full name, and please spell your last
17 name for the record.

18 THE WITNESS: My name is Sanford Merritt Beaver,
19 B-E-A-V-E-R.

20 Whereupon,

21 SANFORD MERRITT BEAVER,

22 after having been first duly sworn, testified as follows:

23 CROSS-EXAMINATION

24 BY MR. CROSS:

25 Q. Good morning, Mr. Beaver.

1 **A.** Good morning.

2 **Q.** You are the chief information officer or the CIO for the
3 Secretary of State for Georgia; is that right?

4 **A.** That is correct.

5 **Q.** One of the things under your purview is what is called the
6 GEMS database, which is used for elections in the State of
7 Georgia; right?

8 **A.** That is one of many systems I have.

9 **Q.** And you consider data in the GEMS database to be valuable?

10 **A.** It is more -- it is confidential. The federal government
11 has defined it as critical infrastructure.

12 **Q.** The data itself?

13 **A.** The whole system.

14 **Q.** So your view is the data and --

15 **A.** Everything.

16 **Q.** In fact, as you just said, you have represented to -- even
17 before today, you have represented to this Court that the
18 Georgia GEMS database is unique and confidential; right?

19 **A.** It is unique and confidential. It has Georgia data in it.

20 **Q.** Well, let's be precise. What you have represented to the
21 Court before is not that the data itself is simply confidential
22 but that the structure of the database is confidential; right?

23 **A.** I have. But that was before a long-term conversation back
24 and forth. That one statement is misleading.

25 **Q.** The statement to the Court that the GEMS -- the structure

1 of the GEMS database is confidential, that was a misleading
2 statement?

3 **A.** No.

4 **Q.** Okay. Well, let's break it down. You represented to the
5 Court -- let's take a step back. You are aware that there is a
6 version that is publicly available from 2002 of a Cobb County
7 GEMS database? We directed you to that; right? You are aware
8 of that?

9 **A.** I am aware that you said there was a database that was
10 claiming to be Cobb County out on the internet -- a stolen copy
11 by an activist according to the plaintiffs.

12 **Q.** You are saying we said that it was stolen?

13 **A.** Yes, you did.

14 **Q.** We said it was stolen?

15 **A.** Yes, you did, on a call with our counsel.

16 **Q.** All right. Mr. Beaver, this is going to be a whole lot
17 easier if you just listen and answer my questions.

18 **A.** Okay.

19 **Q.** Okay. Thank you.

20 Now, you represented to the Court on a call on July 11 of
21 2019 that the public database that we had identified from
22 2012 -- you said it was never an actual database that was used
23 in Georgia? Do you recall saying that to the Court?

24 **A.** No, I don't recall saying that it was never used. I said
25 I don't know anything about that one.

1 Q. You don't recall testifying -- let's take a look. From
2 July 11, 2019, of this year, you had this to say -- and this is
3 at Page 11 of the transcript of that call -- but from what I
4 can tell, whatever they have from 2002 was never an actual GEMS
5 database that was used in Georgia.

6 You don't recall saying that to the Court?

7 A. I believe I did say that based on the information that the
8 plaintiffs had given us.

9 Q. Which included the publicly available database that you
10 had access to on the internet just as we did; correct, sir?

11 A. I did not look at the 2002 databases that you had.

12 Q. In fact, we had a subsequent call where we -- you were on
13 that call with me and others. And we asked you directly, did
14 you look at that database -- that publicly available database
15 before you represented to the Court that from what you could
16 tell it was never an actual GEMS database that was used in
17 Georgia? And you refused to answer that question on the call;
18 right?

19 MR. RUSSO: Objection, Your Honor. That
20 mischaracterizes his statements.

21 MR. CROSS: Mr. Russo is not testifying. Mr. Beaver
22 can handle that.

23 THE COURT: All right. Overruled.

24 Q. **(BY MR. CROSS)** Right? You refused to answer that
25 question on the call? We did not get an answer; right?

1 **A.** I did not answer that.

2 **Q.** But we are clear today -- you have anticipated where I was
3 going. It is true that before you represented to this Court on
4 behalf of the state that the database that we're talking
5 about -- you said from what I can tell was never an actual GEMS
6 database. You had not actually looked at that database before
7 you made that representation; right, sir?

8 **A.** When the plaintiffs --

9 **Q.** Yes or no?

10 **A.** It is not a yes or no question.

11 **Q.** You can't answer yes or no whether you looked at that
12 database --

13 **A.** No, I can't, because you didn't give the full background.

14 THE COURT: Well, sir, you can answer the question
15 yes or no, and then you can explain. Did you look at it, or
16 did you not look at that --

17 THE WITNESS: So --

18 THE COURT: -- before?

19 THE WITNESS: I did say that.

20 **Q.** **(BY MR. CROSS)** And it was not --

21 **A.** It was based on a request from our side for a copy of the
22 database headers, table names so that we could verify what you,
23 the plaintiff, was saying the table structure looked like.

24 We did get a copy of the table structure. It was called
25 Exhibit B. That was the list of table headers that the

1 plaintiff said was on the database that they had that was
2 called Cobb County. I looked at Exhibit B. There were 51 line
3 items on it. Only 9 matched the database.

4 **Q.** You still maintain today that out of the fields on Exhibit
5 B that was filed with this Court that only nine of the tables
6 match?

7 **A.** Correct.

8 **Q.** Okay.

9 **A.** Nine match the table header spelling, structure. That is
10 what a table heading is. It is a structure. If you are a
11 programmer, you have to know the exact name of a table.
12 Anything different, your program doesn't work.

13 **Q.** And do you understand that Exhibit B included screenshots
14 of every table from this public Cobb County database?

15 **A.** No, I did not see any screenshots in Exhibit B that I
16 received.

17 **Q.** So we're clear you made a representation to the Court
18 about a database you had actually not reviewed either on the
19 internet or on the screenshots provided; right?

20 MR. RUSSO: Objection, Your Honor. He's asked the
21 question. I mean, he's answered the question already about
22 what he said. It is not relevant to the issues before the
23 Court for the preliminary injunction, and we would ask that the
24 Court --

25 THE COURT: What is the relevance?

1 MR. CROSS: It is relevant in two ways. One is his
2 credibility. And the second is they continue to maintain a
3 fact that is simply not true, and I'm trying to get to that.

4 THE COURT: And the fact is?

5 MR. CROSS: That there is a unique confidential
6 database in the State of Georgia.

7 THE COURT: All right. I'll overrule for now.

8 But I think that the problem is I still don't know
9 whether you are maintaining -- is your testimony that you
10 actually never looked at the database that they referenced?

11 THE WITNESS: I have now looked at it.

12 THE COURT: All right. But when you represented to
13 the Court that it was -- previously that it was -- it was
14 different -- it was -- you hadn't looked at it at that time?

15 THE WITNESS: I had not looked at the MDB file, which
16 is what they are referring to that they call the Cobb County
17 database.

18 THE COURT: All right. Thank you.

19 THE WITNESS: I looked at the document that they
20 documented what the tables were.

21 THE COURT: And your testimony is that what was filed
22 only had -- because I had it in front of me as well -- was only
23 the table names but nothing -- there were no images?

24 THE WITNESS: No. The table names that were on the
25 document were wrong. They were different.

1 THE COURT: I understand your testimony in that
2 regard. But that is all you saw was table names and nothing
3 else in the exhibits they provided?

4 THE WITNESS: They had table names. They had a long
5 version of the table names. And then they had some text that
6 described what was in the table.

7 THE COURT: Okay.

8 **Q. (BY MR. CROSS)** So you didn't see the screenshots that
9 were included in Exhibit B; right?

10 **A.** Correct.

11 **Q.** And your position so we understand is that what is
12 critical in security with respect to GEMS are the table names
13 themselves; right?

14 **A.** No.

15 **Q.** Well, that is part of it?

16 **A.** The content and the table structure.

17 **Q.** The table structure. Okay. And you're not representing
18 to this Court that the table structure that is in GEMS today is
19 different from what was publicly available in Cobb County or
20 even from other states like California when it used GEMS;
21 right?

22 **A.** I don't know what California has released.

23 **Q.** So you haven't looked at that either even though --

24 **A.** No.

25 **Q.** -- we directed you to that?

1 **A.** No.

2 **Q.** Well, you're not taking the position that it is different
3 from the Cobb County one -- the structure; right?

4 **A.** The table names are the same in the Cobb County database
5 as what we use in Georgia's GEMS database.

6 **Q.** The structure is the same? If you were to put those
7 screenshots side-by-side, they are virtually identical, are
8 they not, sir?

9 MR. RUSSO: Objection, Your Honor. They haven't
10 authenticated this Cobb County database.

11 THE COURT: Well, he says he has now looked at it.
12 So that is -- that is an adequate foundation.

13 **Q.** **(BY MR. CROSS)** The tables themselves are also virtually
14 identical if we look at them side-by-side; right, sir?

15 **A.** From what I can tell, the table names are the same.

16 **Q.** You retained a company called Fortalice to do
17 cybersecurity assessments in 2017 and 2018; right?

18 **A.** Yes.

19 **Q.** And the networks that they examined for that included
20 elections-related networks; correct, sir?

21 **A.** Yes.

22 **Q.** The first assessment that they produced was in October of
23 2017; right?

24 **A.** Yes.

25 **Q.** And they identified 22 -- 22 security risks in the

1 networks that they examined; right?

2 **A.** Yes.

3 **Q.** They then completed another assessment on November 30 of
4 2018; correct?

5 **A.** Correct.

6 **Q.** And you personally requested that assessment, did you not,
7 sir?

8 **A.** I request them every year since I have been employed by
9 the Secretary of State.

10 **Q.** So as of November 30 of last year, as of that assessment,
11 only 3 of the 22 risks identified in 2017 had been remediated;
12 right?

13 **A.** I don't know that that is true. I'm not sure where you
14 got that information.

15 **Q.** Have you not read -- well, let me take a step back.
16 Do you know who Theresa Payton is?

17 **A.** Yes.

18 **Q.** And she actually heads up Fortalice, the company that you
19 engaged; right?

20 **A.** Yes.

21 **Q.** Have you read the declaration that she submitted in this
22 case?

23 **A.** No.

24 **Q.** Well, she states, of the risks outlined in the 2017
25 report, Fortalice found that as of the November 2018 assessment

1 three risks had been remediated with compensating controls and
2 another three were in process of being fixed.

3 You didn't read that before?

4 **A.** No.

5 **Q.** Do you have any reason to think that Ms. Payton who
6 oversaw the risk assessment is wrong?

7 **A.** I would have to review what she said. I don't believe
8 that we only covered three. In fact, I'm confident that we've
9 covered more than three. And maybe her understanding of what
10 was done wasn't clear.

11 **Q.** So the Court cannot rely on Ms. Payton's representations
12 about the risks associated with your system, right, because she
13 may not understand?

14 **A.** No, that is not true.

15 **Q.** Well, you just represented --

16 **A.** The risks that were identified in '17 weren't necessarily
17 the risks that were identified in '18.

18 **Q.** I understand. I'm asking you a simple question,
19 Mr. Beaver. I need you to listen and answer my question.
20 Okay?

21 Are you representing to the Court that it cannot take as
22 fact Ms. Payton's representation that 19 of the 22 risks
23 identified in 2017 had not yet been remediated as of November
24 30 of 2018? Can she not take that as fact?

25 **A.** I need to understand her measurement because remediate may

1 be completely fixed versus in process or partially fixed.

2 **Q.** You are aware that there was an election in the state on
3 November 6 of last year; right?

4 **A.** Yes.

5 **Q.** So at least according to Ms. Payton, at the time that the
6 state went through an election in which almost 4 million voters
7 voted including at the highest levels in the state government
8 for the governor, at least according to her, 19 of 22
9 significant risks -- she characterized them as significant --
10 were still outstanding as of the election; right?

11 **A.** Okay.

12 **Q.** But you just don't know one way or the other as you sit
13 here as to whether that is right; correct?

14 **A.** I would have to see her document.

15 **Q.** Some of the risks that she identified, the first one,
16 Number 1, the most significant was what she called widespread
17 local administrative rights.

18 Do you recall that?

19 **A.** Yes.

20 **Q.** What that meant was that every Georgia Secretary of State
21 user was granted administrative rights on their work stations?

22 **A.** Yes.

23 **Q.** Correct? What that means is they don't just log in and
24 use the computer? With administrative rights, every single
25 user has the ability to download software if they want to to

1 that computer; right?

2 **A.** Yes.

3 **Q.** Administrative rights enables them to affect the
4 programming of that computer; right?

5 **A.** Correct.

6 **Q.** You're aware, as Fortalice pointed out, that this created
7 a significant risk of malware infecting the networks that they
8 were examining; correct?

9 **A.** Are we talking about the 2017?

10 **Q.** I'm talking about the risk assessment that was done in
11 2017.

12 **A.** Yes.

13 **Q.** And, again, we have established the networks that she was
14 examining -- Fortalice was examining included election-related
15 networks; right?

16 **A.** Correct.

17 **Q.** In fact, Fortalice pointed out that the risk was
18 particularly significant for the Georgia Secretary of State
19 because not only did every user have administrative rights on
20 their own work station but they had administrative rights for
21 every work station in the Secretary of State's office.

22 Do you recall that?

23 **A.** Yes.

24 **Q.** Meaning that someone with access to a single work station
25 had administrative rights to every other work station and could

1 do all the things we just talked about; right?

2 **A.** In 2017, that was correct. That has been remediated in.
3 2017.

4 **Q.** So you know that that was remediated, but you don't know
5 about the other 19 that Ms. Payton said were not remediated as
6 of the election?

7 **A.** I would have to see them.

8 **Q.** Another vulnerability that Ms. Payton and her team found
9 was that the Georgia Secretary of State relied on legacy
10 systems and software that were no longer supported or receiving
11 security patches even when new vulnerabilities were identified;
12 right?

13 **A.** Correct.

14 **Q.** And this created a significant risk that a hacker could
15 easily exploit unpatched devices, which is what you were using;
16 right?

17 **A.** Correct.

18 **Q.** Fortalice even found security --

19 **A.** You didn't ask me whether we had remediated it.

20 **Q.** I'll get there.

21 **A.** Okay.

22 **Q.** Fortalice even asked -- I'm sorry. Fortalice even found
23 significant cybersecurity risks with the voter registration
24 database in Georgia; right?

25 **A.** Can you repeat that, please?

1 Q. Fortalice even found significant cybersecurity risks with
2 Georgia's voter registration database in 2017; right?

3 A. I don't know that we would say significant. All of our
4 systems that were identified had issues that needed to be
5 remediated.

6 Q. But --

7 A. I won't say all. Many.

8 Q. Well, they identified -- you don't recall that they
9 identified this one, as well, in the category of significant
10 risk?

11 A. Okay.

12 MR. RUSSO: Objection, Your Honor. He said he
13 didn't -- he doesn't recall the document. If he wants to put
14 the document in front of him so he can see it, go ahead.

15 THE COURT: All right.

16 Q. **(BY MR. CROSS)** Do you recall that one way or the other?
17 Do you need to see the document?

18 A. I need to see the document.

19 MR. CROSS: May I approach, Your Honor?

20 THE COURT: Yes. Are we talking about the 2017 --

21 MR. CROSS: Yes.

22 THE COURT: -- or 2018 report?

23 MR. CROSS: He's got the unredacted one, but he is
24 the only one getting it.

25 Do you have a copy for the Judge?

1 THE COURT: Thank you very much.

2 Is there an exhibit number? Are you introducing
3 this?

4 MR. CROSS: Yes. We will mark this as Exhibit 1,
5 Your Honor.

6 MR. TYSON: Your Honor, regarding Exhibit 1, it was a
7 document marked attorneys' eyes only during production.
8 Mr. Cross and I had discussed preparing a redacted version that
9 will obscure some of the more technical risk factors that
10 Fortalice found. So obviously Mr. Beaver has the full version,
11 but we do -- I had proposed a redacted version to Mr. Cross
12 that we could submit publicly.

13 MR. CROSS: We're trying to grab that now. We'll get
14 that, and then we'll come back to it.

15 THE COURT: I just for the purposes of record want an
16 exhibit number.

17 MR. CROSS: This is Exhibit 1.

18 THE COURT: That is fine.

19 MR. CROSS: The Court will have the unredacted
20 version. We will have a redacted version.

21 **Q. (BY MR. CROSS)** If you turn to Page 3 of the 2017 risk
22 assessment --

23 **A.** Yes.

24 **Q.** -- there's ten categories of risks at the bottom; right?
25 Do you see that?

1 **A.** You mean one through ten? Is that what you're talking
2 about?

3 **Q.** Yes. At the bottom of the page.

4 **A.** Yes.

5 **Q.** Number 10 is lack of security controls for PCC, Inc.;
6 right?

7 **A.** Yes. That is in the semi likely row.

8 **Q.** Right. That is not what I asked you.

9 **A.** Okay. I'm just verifying where I'm at.

10 **Q.** Lack of security controls for PCC, Inc., is Number 10.
11 We're agreed on that; right?

12 **A.** Yes.

13 **Q.** Okay. And Number 10 corresponds to the security risks
14 with the voter registration database because PCC is the company
15 that owns and operates the voter registration database; right?

16 **A.** At the time, yes.

17 **Q.** And ten, if we look under the columns of significant, is
18 to the far right in the risk heat map, so it is in the
19 significant column of risk; right?

20 **A.** Yes. And it is in the row -- what is the row?

21 **Q.** Mr. Beaver, one of the concerns that was noted was the
22 overarching concern of the lack of control and oversight that
23 the state exercised over the registration database at the time.

24 Do you recall that?

25 **A.** Yes.

1 Q. And Fortalice urged you in October of 2017 to require the
2 vendor, PCC, to conduct certain tasks and update its security;
3 correct?

4 A. Correct.

5 Q. And then four months later in February of 2018, there was
6 another assessment by Fortalice; right?

7 A. Yes.

8 Q. And at that point, they identified 15 security risks just
9 with PCC with the voter registration database? Do you recall
10 that?

11 A. I recall there are two different assessments that assessed
12 different data centers. So the assessments of one do not apply
13 to the other.

14 Q. So the assessments in February of 2018 were different
15 additional risks with the voter registration database beyond
16 what was identified four months earlier; right?

17 A. They are separate.

18 Q. Separate? 15 more?

19 A. We had an assessment of one data center where we have some
20 applications running. We had an assessment of another data
21 center where the election system is running. The election
22 system is not in the first assessment.

23 Q. So the election system is in the second assessment where
24 Fortalice identified in February of 2018 15 security risks;
25 correct?

1 **A.** Is that this report? That is not this report.

2 **Q.** That is the February 2018 report. You don't recall that?

3 **A.** I do recall the February one. But I don't remember the
4 count.

5 **Q.** So you need to see that too?

6 **A.** That would probably be good.

7 MR. CROSS: Your Honor, we'll mark this as Exhibit 2.

8 **Q.** **(BY MR. CROSS)** Mr. Beaver, you now have in front of you
9 what is the February 2018 risk assessment that was done by
10 Cloudburst and Fortalice; right?

11 **A.** Yes.

12 **Q.** As you pointed out, this one as you can see in the first
13 sentence in Exhibit 2 indicates that they conducted a vendor
14 cyber risk assessment on PCC Technology, Inc., again the
15 company that owns and operated at least as of this time the
16 voter registration database; correct?

17 **A.** Correct.

18 **Q.** And if you come to the second paragraph, do you see they
19 reported Cloudburst Security suggests remediating the 15
20 identified security risks included in this report? Do you see
21 that?

22 **A.** Yes.

23 **Q.** Does that refresh your recollection that as of February of
24 2018 your independent security vendor identified 15 risks that
25 needed to be remedied?

1 **A.** Yes.

2 **Q.** In the November 2018 assessment, Fortalice did not look at
3 PCC at all again; right? Do you remember you put that outside
4 of scope?

5 **A.** Yes. It is a different data center.

6 **Q.** Are you aware of any attempt to hack a Georgia voter
7 registration database around the time of the November 6
8 election last year?

9 **A.** It wasn't a database -- I mean, the voter registration
10 database. It was the My Voter page.

11 **Q.** Which includes voter registration information; right?

12 **A.** It is a feeder that pulls data from that.

13 **Q.** Right. The My Voter page has access -- the data moves
14 back and forth between that and the voter registration
15 database?

16 **A.** Not back and forth. It is a one-way transfer, meaning the
17 voter registration system feeds an extract of the database to
18 My Voter page. So if anything happens in My Voter page, it has
19 no impact -- cannot have any impact on the voter registration
20 system. It is an isolated system for security purposes.

21 **Q.** In the November 2018 assessment, Fortalice made 20
22 additional -- beyond the reports we have looked at before, made
23 20 additional recommendations to the Secretary of State to
24 improve cybersecurity; right?

25 **A.** Yes.

1 **Q.** And 14 of those were considered low to no cost; right?

2 **A.** I would have to see the form again to see what the count
3 is.

4 **Q.** Let me switch gears. You put a declaration into this case
5 from 2000 -- in this year with the filing from the defendants?
6 Do you recall that?

7 **A.** Yes.

8 **Q.** And that declaration contains a list of you indicate
9 measures the Secretary of State's office has taken to increase
10 security since Logan Lamb and others were able to access voter
11 information hosted on the KSU election servers around August of
12 2016; right?

13 **A.** That was the things that we did for the election center
14 when we moved that in to the Secretary of State. So these are
15 the things we imposed on their system.

16 **Q.** Nowhere in your declaration submitted to the Court do you
17 specifically identify any measure in that list that was taken
18 after September of last year -- after last year's hearing;
19 correct?

20 **A.** Can you restate that?

21 **Q.** Nowhere in your declaration submitted to the Court among
22 this list of things that you have done do you identify any that
23 were taken since September of last year; correct?

24 **A.** I would have to go through the list to see when we put
25 different things in place.

1 Q. Because your declaration doesn't actually indicate when
2 any of those things were put in place other than to say since
3 August of 2016; correct? Right?

4 A. Okay. I would have to see it again to see exact wording.

5 Q. I'm not going to mark it. It is already in the record,
6 Mr. Beaver. Turn to Paragraph 3.

7 Do you see that Paragraph 3 indicates that the list of
8 measures you identify for the Court -- all you are indicating
9 is that they were implemented at some point after August of
10 2016; right?

11 A. For the systems that we brought over from Kennesaw.

12 Q. So my question, just to be clear: There is nowhere in
13 your declaration where you indicate specifically any measure
14 that has been taken since 2000 -- September of last year;
15 right?

16 A. I'm not sure I follow what you are asking me. If you are
17 saying across the board or on election -- the system that we
18 brought from Kennesaw -- are you asking about things that were
19 put in place on that system or on all systems?

20 Q. Mr. Beaver, it is a simple question. You have got a list
21 of things that run several pages; right?

22 A. Yes. Those were all implemented at various times over the
23 last five years.

24 Q. Mr. Beaver, it is a whole lot easier if you just answer
25 the question.

1 You have got a list of measures you say have been
2 implemented since August of 2016? Yes or no?

3 **A.** Yes.

4 **Q.** Yes?

5 **A.** Yes.

6 **Q.** Nowhere in your declaration do you state to the Court that
7 any of those measures were implemented since September of last
8 year; correct?

9 **A.** I don't think I stated anywhere what date they were
10 implemented.

11 **Q.** Thank you. You submitted a 2018 declaration in this case?
12 Do you recall that?

13 **A.** Yes.

14 **Q.** Do you recall that?

15 One of the things you represented to the Court at that
16 time was we take every reasonable precaution, meaning the
17 Secretary of State's office; right? We take every reasonable
18 precaution to protect our systems from a cyber incident. Do
19 you recall that?

20 **A.** Yes.

21 **Q.** But you didn't disclose to the Court that only a year
22 earlier -- less than a year earlier your independent vendor had
23 identified 22 significant risks with your systems, including
24 election-related networks? That did not appear in your
25 declaration, did it, sir?

1 **A.** Security is not a --

2 **Q.** Yes or no. That did not appear in your declaration?

3 **A.** It did not appear.

4 **Q.** You go on in that same sentence as an example of one of
5 the ways you protect the system -- you say, including
6 conducting regular cyber assessments with penetration testing;
7 right?

8 **A.** Yes.

9 **Q.** So you were representing to the Court that penetration
10 testing is one of the ways that you confirm that your system is
11 secure; right?

12 **A.** That is one of the ways.

13 **Q.** In the October 2017 assessment, again less than a year
14 before your August 2018 declaration to the Court, Fortalice
15 actually conducted one of those penetration tests; correct?

16 **A.** Yes.

17 **Q.** And it was successful? They penetrated the network,
18 didn't they, sir?

19 **A.** They -- not the election system network. They penetrated
20 the Secretary of State data center, which does not have the
21 election system in it.

22 **Q.** They penetrated --

23 **A.** There are two different data centers I said earlier, the
24 one at the Secretary of State's office which holds our
25 corporations database, our professional licensing database, our

1 website, but does not contain the elections -- the voter
2 registration system.

3 The system they penetrated was the one from the Secretary
4 of State's data center. That was not the election system.

5 **Q.** Is the answer to my question yes, they did a penetration
6 test, like you represented to the Court, that allowed them to
7 penetrate some aspect of the Secretary of State's network?

8 That is true; right, sir?

9 **A.** That is very true.

10 **Q.** And, in fact, the penetration enabled them to obtain
11 domain administrator rights on the network that they
12 penetrated; correct?

13 **A.** Correct.

14 **Q.** And we've talked about the expansive abilities of
15 administrator rights already. That is what they obtained;
16 right?

17 **A.** Correct.

18 **Q.** In fact, they point out they were able to gain access to
19 network security systems? That was one of the things they
20 identified; correct?

21 **A.** Correct.

22 **Q.** They point out that they were able to review the
23 enterprise architecture and system configurations; correct?

24 **A.** Correct.

25 **Q.** And so when you represented to the Court that one of the

1 measures that you take to secure the information technology,
2 the networks for the Secretary of State was penetration
3 testing, you did not disclose to the Court that the most recent
4 penetration testing that had been done in October of 2017 gave
5 an independent firm administrator access over the network?
6 That does not appear in your declaration for the Court, did it,
7 sir?

8 **A.** No. They didn't ask that question.

9 **Q.** Who is they? The lawyers who asked you to write it?

10 **A.** Asked did we do this. Yes, we did. Did we fix the
11 penetration issue? Yes, we did. That is why we hire
12 Fortalice.

13 **Q.** But as of the November 6 election last year, according to
14 Fortalice that you relied on for that, 19 of the 22 risks were
15 unremediated? We're clear on that; right?

16 **A.** Administration rights was remediated prior to that.

17 **Q.** That is 1 of the 3 out of the 22; correct?

18 **A.** I would have to see the three again. I don't know what
19 are the three you are speaking of.

20 **Q.** Well, Ms. Payton will testify. She can clear it up.

21 Do you know Dr. Michael Shamos?

22 **A.** I know of him.

23 **Q.** And you are aware that he's an expert that the state has
24 offered on election security in this case?

25 **A.** Yes.

1 Q. Did you review his deposition transcript?

2 A. Yes.

3 Q. You've previously pointed out that one of the measures
4 taken to secure elections in this state are parallel testing;
5 right?

6 A. Yes.

7 Q. And you understand that Dr. Shamos testified under oath
8 that the parallel testing done in the state is ineffective?
9 Are you aware of that?

10 A. I thought the word was insufficient.

11 Q. Okay. Well, does ineffective and insufficient mean
12 something different to you?

13 A. Yes.

14 Q. Okay. Let's put it this way. Do you recall him
15 testifying that he has no confidence in a parallel test that
16 tests only 1 out of the some 70,000 DREs you have in the state?
17 Do you recall that, sir?

18 A. I do.

19 Q. Do you disagree with Dr. Shamos? Do you think he is wrong
20 about that?

21 A. He is the expert.

22 Q. So you do not disagree with him?

23 A. I do not disagree.

24 Q. Mr. Beaver, if the Court were to order the state to
25 implement hand-marked paper ballots for elections this year,

1 would you make every effort to comply with that order?

2 **A.** I think we would have to make all efforts. That doesn't
3 mean it would be successful. Without processes in place, we
4 definitely would have issues. In fact, the issues may be
5 major.

6 **Q.** You're not suggesting you would violate a court order?

7 **A.** I just said we would.

8 **Q.** You would comply with the order; right?

9 **A.** We would do it to the best of our ability. That doesn't
10 mean it would be successful.

11 **Q.** I'm sorry. As the CIO of the Secretary of State's office,
12 you don't have confidence in your ability to comply with a
13 court order; is that right?

14 **A.** Somebody can ask us to do --

15 **Q.** Yes or no?

16 **A.** -- something that is not possible.

17 **Q.** But you haven't offered any opinion in the declaration in
18 this case that it would be impossible for you -- impossible for
19 you to comply with a --

20 **A.** I just stated without a process --

21 **Q.** You have got to let me finish the question. Okay.

22 You put sworn testimony into this case. Nowhere in that
23 declaration do you offer an opinion or claim to the Court that
24 if the Court were to order the state to use hand-marked paper
25 ballots in the upcoming elections that it would be impossible

1 for the state to do that? That is not an opinion that appears
2 in your sworn testimony, does it, sir?

3 **A.** Correct.

4 MR. CROSS: Thank you.

5 CROSS-EXAMINATION

6 BY MR. BROWN:

7 **Q.** Mr. Beaver, my name is Bruce Brown. I represent the
8 Coalition plaintiffs in this case. And I have a few questions
9 for you.

10 Since March of 2017, has the Secretary of State undertaken
11 remediation of any of the central servers or county servers to
12 address the impact of the 2016, 2017 exposure of the KSU server
13 to the internet?

14 **A.** Yes.

15 **Q.** Has it wiped the servers?

16 **A.** When we took over responsibility for KSU, we brought
17 nothing with them. We started with brand-new hardware, a
18 brand-new operating system. We went back to the original
19 software on the original CD and loaded that from scratch. We
20 started with a clean slate.

21 **Q.** But you did not do that in any of the 159 counties, did
22 you?

23 **A.** No.

24 **Q.** You testified about the My Voter page and how it is a
25 one-way recipient of information from the central registration

1 system; correct?

2 **A.** Yes.

3 **Q.** If someone messed with the My Voter page though, voters
4 who were looking up to see where they should vote could get bad
5 information; correct?

6 **A.** I don't know.

7 **Q.** Okay. Now, as the chief information officer at the
8 Secretary of State, you will be the leading person at the
9 Secretary of State's office for the state's new implementation
10 of their new system; correct?

11 **A.** Can you restate that?

12 **Q.** You are going to be in charge from the Secretary of
13 State's office of the new -- the new machine -- the new system
14 that the state is purchasing; correct?

15 **A.** I have the IT responsibilities. Not operational. Not
16 application.

17 **Q.** Okay. And in terms of your IT responsibilities -- I mean,
18 you're aware that there is no contract in place yet; correct?

19 **A.** Correct.

20 **Q.** And that after there is a contract in place, there will be
21 a bid protest period; correct?

22 **A.** Correct.

23 **Q.** And that after a bid protest period or at some point, the
24 new system will have to be certified; correct?

25 **A.** Correct.

1 Q. And the certification protocols are in the regulations;
2 correct?

3 A. Yes. In fact, I believe it has already been certified.
4 But the version we will get will have to be recertified.

5 Q. And certification is not just a rubber stamp, is it?

6 A. There is testing.

7 Q. Okay. And that there will be -- and I believe that the
8 new system is 30,000 ballot marking devices?

9 A. I don't have the count. You would have to ask somebody
10 like Michael Barnes that number.

11 Q. And 7500 scanners?

12 A. Okay. I'll take your word for it.

13 Q. But you know it is going to be in 159 counties, and each
14 of the counties will have to have their own servers and their
15 own election management system; correct?

16 A. Correct.

17 Q. And the counties themselves will have to arrange for
18 purchase of maintenance and service on their gear; correct?

19 A. All of this equipment will be under warranty, and support
20 will be included on that. So --

21 Q. But the counties will have to pick up the bill for some of
22 that; right?

23 A. Not in the first -- I think the first two years, no.

24 Q. But after that, they will?

25 A. I don't know what is going to happen after the first two

1 years.

2 **Q.** And the -- I know a vendor hasn't been selected. But from
3 what I've read, these systems run on Windows 7; correct?

4 **A.** I don't know what will be run. We haven't declared who
5 the vendor is. So until that is declared, we won't know what
6 it runs on.

7 **Q.** Are any of the vendors that are in the bidding run on
8 anything newer than Windows 7?

9 **A.** My understanding --

10 MR. RUSSO: Objection, Your Honor. The BMDs are not
11 at issue in this case.

12 THE COURT: What is the relevance to the question?

13 MR. BROWN: Your Honor, the state's main defense is
14 that don't grant the plaintiffs' relief because we will fix it
15 in 2020 with the new system. So therefore if they want to take
16 the new system off the table entirely, then they have no
17 defense in this case. But they are saying --

18 THE COURT: All right. Well, you can pursue this to
19 a limited degree.

20 MR. BROWN: Thank you, Your Honor.

21 **A.** I have heard that some systems that were bid run on
22 Windows 10.

23 **Q.** **(BY MR. BROWN)** And from your perspective, the
24 implementation schedule is aggressive; correct?

25 **A.** It is tight.

1 Q. It is tight? Is that what you said?

2 A. Yes.

3 Q. And --

4 THE COURT: I would appreciate it if we wouldn't have
5 any comments via laughing unless something is genuinely funny.
6 Everyone else will know it is funny as in that no one has a
7 case to proceed with.

8 Go ahead.

9 MR. BROWN: Thank you, Your Honor.

10 Q. **(BY MR. BROWN)** So this tight schedule calls for the first
11 statewide use of the system in the 2020 presidential primaries;
12 correct?

13 A. No.

14 Q. What is wrong with that?

15 A. We will be using it this year.

16 Q. Statewide?

17 A. No.

18 Q. So the first statewide use of the system will be the
19 presidential primaries; is that right?

20 A. That is my understanding.

21 Q. And that is if everything goes right?

22 A. Yes.

23 Q. And if something goes wrong, you will have to use the
24 current DRE system?

25 MR. RUSSO: Objection, Your Honor. He has already

1 testified that he is not in charge of implementing the new
2 system.

3 **Q.** (BY MR. BROWN) But if an injunction isn't granted --

4 **A.** I am not in charge. I'm the IT manager for the Secretary
5 of State. Not operational. I do not do contracts.

6 **Q.** Who is the operational person or people?

7 **A.** That would fall under the elections director and the
8 Center for Elections.

9 **Q.** Okay. That would be respectively Mr. Harvey and
10 Mr. Barnes?

11 **A.** Yes.

12 **Q.** Okay. Who else is involved in the implementation besides
13 those two and you?

14 **A.** We'll probably have a project team that will run under the
15 Secretary himself.

16 MR. BROWN: Thank you very much.

17 DIRECT EXAMINATION

18 BY MR. RUSSO:

19 **Q.** Good morning.

20 **A.** Good morning.

21 **Q.** Mr. Beaver, you testified earlier that you are the CIO of
22 the Secretary of State's office; isn't that right?

23 **A.** Yes. That is correct.

24 **Q.** And as CIO, your job is not to implement paper ballot
25 systems; is that correct?

1 MR. CROSS: Objection, Your Honor. Leading. This
2 is --

3 **Q.** (BY MR. RUSSO) What is your role as CIO?

4 **A.** I run the IT equipment for the state. That includes the
5 data systems of each of the agencies.

6 **Q.** Now, plaintiffs' counsel asked you about Fortalice
7 reports. Do you recall that?

8 **A.** Yes.

9 **Q.** And remediation of -- remediation of issues that were
10 identified by Fortalice; correct?

11 **A.** Correct.

12 **Q.** Now, do you know -- do you know when Fortalice writes its
13 reports for the state if those reports include partial
14 remediation of any identified issues?

15 **A.** Yes. They actually include three phases of remediation.

16 **Q.** Can you explain that for us?

17 **A.** Phase 1 is what you can do immediately to have a big
18 impact. Phase 2 is essentially getting close to the end.
19 Phase 3 is completely solving the problem.

20 I can give you an example.

21 **Q.** Sure.

22 **A.** A website may be running on an old antiquated application
23 that can't be patched. To replace it may take multiple years.
24 But you can remediate it by putting it outside of your firewall
25 in the DMZ so that if it got hacked it wouldn't impact anything

1 else. So moving it out reduces the risk but doesn't totally
2 remediate the problem.

3 Security is all about reducing risk. There will always be
4 problems.

5 **Q.** And the Secretary of State's office hires Fortalice to
6 identify risks; correct?

7 MR. CROSS: Objection. Leading, Your Honor.

8 THE COURT: Sustained.

9 **Q. (BY MR. RUSSO)** What is the reason why the Secretary of
10 State's office hires Fortalice?

11 **A.** Fortalice is a very skilled company in identifying all
12 types of cybersecurity issues. We depend on them to help us
13 find where we need direction.

14 **Q.** I want to ask you about some security measures that have
15 been implemented by the Secretary of State's office.

16 What is eNet?

17 **A.** eNet is the Georgia voter registration system.

18 **Q.** And who can access eNet?

19 **A.** Only state employees and county election officials.

20 **Q.** And have new security measures been implemented to ensure
21 only authorized users access eNet?

22 **A.** Yes. Over the last five years, we have implemented many
23 different kinds.

24 **Q.** Can you please tell us about some of those?

25 **A.** Multifactor authentication for sign-in. Password

1 strength. Password -- basically if you don't use the system in
2 X number of days, we will turn you off. We go through a
3 process that says -- reviewing who has access to eliminate
4 people that are no longer part of the eNet community.

5 THE COURT: Could we stop here for a second.

6 It would be more helpful to the Court if you could
7 identify when your -- what is your recollection as to when each
8 of these measures were taken. Because I have the Fortalice
9 reports in front of me. And I'm trying to measure what you are
10 saying relative to what the reports say also.

11 **Q. (BY MR. RUSSO)** Do you know when each of those measures
12 were implemented?

13 **A.** Multifactor was a little over a year ago. Strength in
14 password was probably close to four years ago. Retirement of
15 people that don't need access was done five years ago. Review
16 or changing the timeout date was done about three years ago.

17 **Q.** What about any more recent actions that have been taken?

18 **A.** I would have to go back through my notes.

19 **Q.** Now --

20 THE COURT: Now, we were just talking about eNet.
21 You mean the voter registration database?

22 THE WITNESS: The voter registration system. That is
23 not the GEMS system.

24 THE COURT: I understand. I'm sorry to screw up the
25 timing. But I'm a little bit confused because Fortalice

1 indicated that evaluating PCC's systems at least in its 2018
2 report was outside the scope of the assessment given in the
3 2018 midterm and then they also indicated that you -- is that
4 right?

5 THE WITNESS: Yes.

6 THE COURT: And even at that time, they had obtained
7 administrative access because of -- an unprivileged access. So
8 are we talking about a period of time after the report that was
9 done in November 2018?

10 THE WITNESS: Can you reference which one you're
11 looking at?

12 THE COURT: I'm looking at the 2018 report --
13 November 2018 report. Among the things they indicated was --
14 you know, some things were underway in terms of strengthening
15 the password policy. But they also indicated that Fortalice
16 had obtained domain administrative access at Page 9.

17 THE WITNESS: So the event where Fortalice was able
18 to get domain access was their original report?

19 THE COURT: No. The second report. November of
20 2018.

21 THE WITNESS: I don't have that one in front of me.

22 THE COURT: All right. We'll follow up later. I
23 don't want to be --

24 MR. CROSS: He has that report, Your Honor. The
25 November 2018 one. It is one of the ones. I think it is

1 Exhibit 2.

2 THE WITNESS: I have a February one and an
3 October one.

4 THE COURT: All right. You-all can follow up on this
5 later on.

6 **Q. (BY MR. RUSSO)** Mr. Beaver, has the Secretary of State's
7 office implemented any security measures to detect malware on
8 eNet?

9 **A.** Yes. We have implemented end point protection, as well as
10 malware protection applications. They do two different things.

11 **Q.** Can you tell us --

12 **A.** One detects known malware that could arrive on the system
13 or download to the system. End point protection actually looks
14 at activity that is outside of the norm of that system. So
15 this would be useful for malware that has not been identified.

16 **Q.** And do you know -- are you aware of the Secretary of State
17 putting the end point protection requirements into rule, in
18 fact?

19 **A.** Yes. As part of the rule that was put in place this year,
20 that was one of the things that was established as a rule.

21 **Q.** And you recall that rule? Were you involved in drafting
22 that rule?

23 **A.** I was.

24 **Q.** And I want to hand you the -- hand you this rule.

25 Mr. Beaver, is this the rule you are referring to?

1 **A.** Yes, it is.

2 **Q.** Rule 590-8-3-.01?

3 **A.** Yes.

4 **Q.** And I want to direct your attention to Subsection B-2 of
5 this regulation regarding the maintenance of security standards
6 with the Georgia voter registration system. Do you see that?

7 **A.** Yes, I do.

8 **Q.** That involves anti-malware software and end point
9 protection; correct?

10 **A.** Yes.

11 **Q.** And is this the anti-malware and end point protections
12 that you were referring to?

13 **A.** Yes, it is.

14 **Q.** Mr. Beaver, what would -- strike that.

15 Mr. Beaver, if the file is being exported -- this rule
16 refers to export files. If a file is being exported out of the
17 GEMS system, how would this software affect that?

18 **A.** As a file gets created, it has to be put someplace. So it
19 is first created on the server. Once that file is exported out
20 of the application and put on the server, the first thing the
21 system does is it scans it for any malware.

22 Then when that file gets moved to someone's desktop, such
23 as someone in the election center because they want to take it
24 and move it to the GEMS server, once it lands to their desktop,
25 it will get scanned again.

1 If they want to move it then on to the GEMS server, the
2 policy of what Michael Barnes uses is that he will take a USB
3 that he regularly uses. He will format it. The machine will
4 automatically encrypt it. He does not have a choice. It
5 automatically encrypts that drive prior to it being put on that
6 drive.

7 If there is anything on that drive other than what he has,
8 especially an active file, meaning something that runs like
9 malware, the end point protection will detect that and stop the
10 activity.

11 **Q.** So it wouldn't be able to transfer over? Is that what you
12 are saying?

13 **A.** Correct.

14 MR. CROSS: Your Honor, he can't lead his own
15 witness.

16 MR. RUSSO: No further questions, Your Honor.

17 MR. CROSS: Two brief points, Your Honor. Let me
18 just grab the November -- my apologies, Mr. Beaver. I thought
19 we had handed you that.

20 RE CROSS-EXAMINATION

21 BY MR. CROSS:

22 **Q.** Before we look at that report, one clarifying question,
23 Mr. Beaver. You talked about end point protection; right?

24 **A.** Yes.

25 **Q.** End point protection is not available -- it is not present

1 on the GEMS system; correct?

2 **A.** Correct. The GEMS is an air-gapped environment. For end
3 point protection to work, it has to be tied to --

4 **Q.** That is not my question, sir. We're going to talk a lot
5 about whether that system is actually air gapped today.

6 Just to clarify, your belief is that your GEMS system is
7 air gapped; correct?

8 **A.** Correct.

9 **Q.** Did you read Dr. Shamos' description of what it means to
10 be air gapped in his deposition?

11 **A.** I don't recall exactly what he said.

12 **Q.** Do you recall when you read his deposition thinking to
13 yourself he is wrong about what it means to be air gapped? Did
14 that strike you as you read his deposition?

15 **A.** No.

16 **Q.** All right. Turn briefly to what we'll mark as Exhibit 3,
17 the November 2018 assessment. As part of this assessment,
18 Fortalice also did penetration tests among other tests;
19 correct?

20 **A.** Yes.

21 **Q.** Turn to Page 22 if you would. Do you see the sentence at
22 the bottom under the screenshot -- it says at this point. Do
23 you see that?

24 **A.** Yes.

25 **Q.** Here Fortalice refers at this point -- this is November 30

1 of 2018. That is the report you have in front of you; right?

2 **A.** Yes.

3 **Q.** Here Fortalice reports after conducting various tasks
4 including penetration tests, at this point Fortalice controlled
5 the domain and concluded testing. Did I read that correctly,
6 sir?

7 MR. RUSSO: Your Honor, objection.

8 **Q.** **(BY MR. CROSS)** Did I read that correctly, sir?

9 MR. RUSSO: That is outside the scope of my cross of
10 Mr. Beaver.

11 THE COURT: Well, you spoke about remediation, and so
12 I'm going to allow it. But you're not going to go extensively.

13 MR. CROSS: That is my last question.

14 **Q.** **(BY MR. CROSS)** Did I read that correctly?

15 **A.** That you read correctly.

16 MR. CROSS: Thank you.

17 THE COURT: All right. I have a few questions that
18 won't be counted against anyone. My other question we'll try
19 to also -- I think Ms. Cole may have gotten me the estimate of
20 the time to count against anyone.

21 EXAMINATION

22 BY THE COURT:

23 **Q.** I think that Exhibit 3, the November 2018 report, will
24 reflect that what I indicated before that -- that the review of
25 the PCC system, which dealt with the voter registration system,

1 was outside its scope.

2 But in -- what I am trying to understand is something
3 about the November 2018 system and where you are going. My
4 understanding from reading this report is that the Secretary of
5 State's office doesn't actually under its contract have the
6 authority to audit in an active way the PCC system; is that
7 right?

8 **A.** Yes.

9 **Q.** And is that still true?

10 **A.** No.

11 **Q.** Okay. When did that end that you -- when did you start
12 having the actual authority to audit the PCC system?

13 **A.** Soon after this report.

14 **Q.** Okay. And -- but soon after the February 2018 report?

15 **A.** The November.

16 **Q.** The November 2018 report?

17 **A.** Correct.

18 **Q.** All right. And has there been an audit since then where
19 there was active efforts actually looking at the way the data
20 is handled?

21 **A.** We have remediated since then these issues. We're in the
22 process of moving that data center to complete Secretary of
23 State control.

24 **Q.** So who has it now? Is it part in PCC and part with the
25 Secretary of State, or where is it at?

1 **A.** We are right in the middle. We started July 1 to move it
2 from their control.

3 **Q.** Of 2019?

4 **A.** Yes.

5 **Q.** Okay.

6 **A.** Contractually, we were tied to them until June of 2019.

7 **Q.** So up through June of 2019, the state couldn't actively
8 audit PCC's data and method of management of the voter
9 registration database?

10 **A.** Under contract, no. We did get the ability to do that in
11 a limited sense. That is how we were able to start identifying
12 things we needed to fix.

13 **Q.** And that was in the February -- reported in the
14 February 2018 report, but it wasn't within -- the follow-up
15 wasn't in the November 2018 report that Fortalice did or
16 Cloudburst did; is that right?

17 **A.** Correct.

18 **Q.** In the February of 2018 report, there was a whole host of
19 concerns that the Cloudburst security team working with
20 Fortalice had about the accessibility of the voter database; is
21 that right? I'm looking at Page 11 of that report.

22 **A.** Yes. They identified that that remote access was an issue
23 that needed to be worked on.

24 **Q.** And they indicated that the firewall permitted a list of
25 IP addresses access to the internal systems bypassing the VPN

1 and that PCC does not block connections to the VPN from IP
2 addresses of known threat sources or foreign countries; is that
3 right?

4 **A.** That is what they identified.

5 **Q.** All right. So what I would like to understand is what --
6 I know that wasn't brought to my attention in the last hearing
7 in September of 2018 by the state. And I don't believe that
8 the plaintiffs had access to this information.

9 So I'm trying to understand was this -- I'm really trying
10 to understand why it wasn't brought to my attention, as much as
11 anything else.

12 You were aware of it, I gather?

13 **A.** This is a working list of what we were working on.

14 **Q.** And would it be fair to say because the PCC system's
15 management was private that there was -- until you could take
16 it over, let's say, in July of this year that there are still
17 limits in what you could do with the PCC registration system --
18 voter registration system?

19 **A.** Starting after the first report, we were able to gain
20 better control and put essentially our security policies in
21 place. We put monitoring services in place on top of their
22 system to monitor what was going on. We put things like the
23 Albert sensor from MS-ISAC in place there. We have an outside
24 firm that does now monitoring all traffic in and out.

25 **Q.** But was all that in place in the early fall of 2018?

1 **A.** Yes.

2 **Q.** In September of 2018 when we had that hearing?

3 **A.** I think it was implemented in the early part of '18.

4 **Q.** Well, this was brought to your attention in the early part
5 of '18 according to this report. I'm referencing the
6 Cloudburst 2018 --

7 **A.** And we quickly implemented a lot of things.

8 **Q.** But then in November of 2018, you didn't follow up on that
9 in this -- you didn't have -- you didn't contract with
10 Fortalice to go and follow up on whether, in fact, it was
11 functioning as you apparently believe it was in November of
12 2018?

13 **A.** All through 2018, we had weekly calls with Fortalice as we
14 worked through remediation there. So the assessments -- they
15 knew exactly what was going on because they were helping us
16 through this remediation process.

17 We knew we were going to switch over to a new data center
18 that was Secretary of State controlled. So assessing something
19 that you are about to turn off, especially by a company that
20 was already doing the work to fix it, was not something that we
21 needed to do.

22 **Q.** Well, what happened, for instance, when they evaluated in
23 February of 2018 that the PCC Georgia Secretary of State's
24 environment relating to the voter registration system was
25 directly connected infrastructure that hosts similar voter

1 applications in Texas? And they indicated there was risk of
2 exposure in the systems because an attacker who had gained
3 access to one environment could likely gain access to the
4 other.

5 Was that immediately terminated? What happened?

6 **A.** Yes. That was immediately within about a week and a half.
7 PCC was sharing the data center between two states that they
8 were hosting. We didn't want that.

9 **Q.** So the Cloudburst Security system team also identified
10 that the system used software -- unsupported older software to
11 operate internet-facing web applications?

12 **A.** I believe that is the JBoss software. Yes.

13 **Q.** Was that changed by September or October of 2018?

14 **A.** It was not. It was not a remediation to change it because
15 it would break the application. So we remediated it a
16 different way. We used something called Cloudburst, which
17 looks at the data coming in and out and looks for the types of
18 traffic where somebody would be trying to hack, such as SQL
19 injection and cross-site scripting. That is the weaknesses
20 those patches were trying to repair. There are multiple ways
21 to remediate systems.

22 **Q.** Would it be fair to say that when, in fact, this one
23 evaluation that Cloudburst itself did in February 2018 of PCC
24 Technology relating to the voter registration database had, I
25 think, identified 15 very serious issues relating to this --

1 that none of that was brought to the Court's attention?

2 **A.** Okay. Yes.

3 **Q.** Then back in 2000 -- in the report that was done by
4 Fortalice in November of 2018, Fortalice itself reported to you
5 that Fortalice identified several instances of voter
6 registration data hosted on file shares. This was as of
7 November of 2018. And I'm referring to Page 19 of the
8 November 2018 report.

9 **A.** Is this the November --

10 **Q.** The November one. So I'm referring to Page 19. And the
11 text there says, sensitive information stored insecurely. It
12 should be noted Fortalice did not check to see if the voter
13 information observed was redacted or complete. Additionally,
14 Fortalice's search was not exhaustive. An additional review
15 should be performed by SOS Georgia IT staff in order to
16 identify all instances of sensitive data stored insecurely.

17 This related to voter registration system PCC; is that
18 right?

19 **A.** Yes.

20 **Q.** But they weren't charged with that, so they didn't do
21 more?

22 **A.** Correct.

23 **Q.** Thank you very much. And so as of July 1, you've taken
24 over everything that PCC was doing -- the state has? July 1 of
25 2019?

1 **A.** The hosting of the system.

2 **Q.** The hosting.

3 **A.** Not the application.

4 **Q.** Who is dealing with that? It is still PCC's application?

5 **A.** Yes. So they are still responsible for the maintenance
6 and support of the application.

7 **Q.** And have there been requirements of change about this -- I
8 mean, about the application and updating it or -- because we
9 were talking before about outdated software again in the
10 2019 -- just a few minutes ago.

11 **A.** Yes.

12 **Q.** So what has changed about the software?

13 **A.** We have gone through patching of all of the systems.
14 Those systems that can't have the patching, such as the JBoss,
15 we have remediated differently. Meaning if you can't patch
16 something --

17 **Q.** Patch and update it?

18 **A.** Update it. Because some applications need a feature
19 function or can't deal with a feature -- the new features of
20 new patches. Then you need to remediate in a different way.
21 And as I said, we have used an alternative way to remediate
22 that. But other types of patching we've already done.

23 **Q.** And are there any audit reports here that have not -- that
24 have been given to the Court or that are available that address
25 the efficacy of that patching and remediation process? Because

1 obviously the voter registration database and its integrity and
2 whether people appear properly on the database is a big deal.

3 **A.** Uh-huh (affirmative).

4 **Q.** Are there any other updated reports in terms of evaluating
5 that available that I haven't seen? Because I haven't seen
6 anything beyond what the -- the three ones I have referenced.

7 **A.** There are no other reports.

8 **Q.** Thank you. When does that contract extend to, by the way,
9 the one with PCC?

10 **A.** The hosting ended on June 30.

11 **Q.** Right. But the use of the software?

12 **A.** The software continues on. We renew it every year.

13 **Q.** And so was it renewed on July 1st?

14 **A.** Yes, it was.

15 THE COURT: Thank you.

16 MR. CROSS: Unless the Court has further questions, I
17 believe the witness can step down, Your Honor.

18 THE COURT: All right. Very good. The witness is
19 excused -- I didn't hear from Mr. Brown.

20 MR. BROWN: No more questions, Your Honor.

21 THE COURT: Mr. Russo?

22 MR. RUSSO: No more questions, Your Honor.

23 THE COURT: All right. Very good. Thank you very
24 much.

25 MR. CROSS: If Your Honor wants to continue, we'll

1 call our next witness. This one I think -- for us it will be
2 short.

3 THE COURT: I think we need a five-minute restroom
4 break here. Unless somebody has to go to the restroom, I would
5 just encourage you not to or else it is very hard to get
6 everyone back in here. If you do, of course, go ahead and make
7 use. Because I'm going to keep on running likely until 1:00.

8 MR. CROSS: Great. Thank you, Your Honor.

9 THE COURT: All right.

10 **(A brief break was taken at 11:45 A.M.)**

11 THE COURT: Have a seat. Before we start, I would
12 appreciate if the state would provide me a copy of the new
13 contract with PCC. Can you provide me a copy of the PCC
14 contract by this evening? Is that feasible?

15 MR. RUSSO: Yes, Your Honor. I think we can probably
16 pull that together pretty quickly.

17 THE COURT: Okay. And if I understand correctly,
18 that is continuing and therefore whatever their software is in
19 use will be in use during at least -- in the next year that
20 they are using?

21 MR. TYSON: Yes, Your Honor. The eNet software is
22 widely used across the country. And yes, it will be in use for
23 at least the next year.

24 THE COURT: Thank you.

25 COURTROOM DEPUTY CLERK: Please raise your right

1 hand.

2 **(Witness sworn)**

3 COURTROOM DEPUTY CLERK: Please have a seat. Loudly
4 and clearly state your name, and please spell your last name
5 for the record.

6 THE WITNESS: My name is Michael Leon Barnes,
7 B-A-R-N-E-S.

8 Whereupon,

9 MICHAEL LEON BARNES,

10 after having been first duly sworn, testified as follows:

11 CROSS-EXAMINATION

12 BY MS. BENTROTT:

13 **Q.** Good morning, Mr. Barnes.

14 **A.** Good morning.

15 **Q.** Nice to see you again.

16 **A.** Good to see you.

17 **Q.** I'm Jane Bentrott on behalf of Curling plaintiffs,
18 Morrison & Foerster.

19 Mr. Barnes, as part of your current practice at the
20 Secretary of State's office, the Secretary of State's office
21 prepares ballots for review by the counties; is that correct?

22 **A.** That is correct.

23 **Q.** And to do so, they prepare PDFs of the ballots and send
24 those to the counties for their review; correct?

25 **A.** That is correct.

1 Q. And the PDFs of the ballots, they show how the ballot will
2 appear as a paper optical scanned ballot; correct?

3 A. That is correct.

4 Q. And so counties don't review the ballot proofs as they
5 would appear on a DRE screen; correct?

6 A. That is correct.

7 Q. The state prepares paper voter certificates for use in
8 elections; correct?

9 A. That is correct.

10 Q. And the state supplies those paper voter certificates to
11 all the counties; correct?

12 A. That is correct.

13 Q. And each voter completes one of these paper forms by hand
14 when they enter a polling location; correct?

15 A. That is correct.

16 Q. And each voter must complete and sign this paper form
17 before they are checked in on ExpressPoll and before they can
18 vote; correct?

19 A. Correct.

20 Q. All of the counties in Georgia currently have an inventory
21 of optical scanners; correct?

22 A. Counties have a minimum of three optical scanners -- they
23 should have -- in their inventory. That is correct.

24 Q. And those optical scanners were designed to be precinct
25 count optical scanners; correct?

1 **A.** They were designed as precinct level count, yes.

2 **Q.** The Center for Election Systems learned in 2016 from Logan
3 Lamb that there were many files available through the internet
4 that should not have been accessible; correct?

5 **A.** I recall us receiving a phone call or my executive
6 director receiving a phone call from Mr. Lamb stating that he
7 was a security expert and was wishing to speak with the Center
8 for Elections Systems to see what assistance he may be able to
9 provide to the center and that he had visited our website,
10 elections.kennesaw.edu, and had seen that there were files
11 seemingly accessible.

12 **Q.** And you learned that he was able to access those files
13 without any user names or passwords; correct?

14 **A.** I just know that he had the phone call with Mr. King.
15 What he told Mr. King in relation to what he was able to
16 access, how he accessed it, I cannot speak to.

17 **Q.** But this is something that you learned from Mr. King;
18 correct?

19 **A.** That is correct.

20 **Q.** And you don't know of any forensic work that was done to
21 see if you could check the files that Mr. Lamb had downloaded;
22 correct?

23 **A.** I do not know of any steps. I know that I did not take
24 any steps. I do not know what Mr. King or others within my
25 office examined after that phone call in relation to what was

1 accessible.

2 **Q.** And so you are not aware of any steps that were taken by
3 anyone to examine what files were accessible?

4 **A.** I do not know.

5 **Q.** And you're not -- you don't know if any effort was made to
6 determine how long prior to August 26 -- 28, 2016, someone
7 would have had the same access to those files that Mr. Lamb
8 had; correct?

9 **A.** I do not know.

10 **Q.** You don't recall participating in any discussions about
11 investigating the cause of those vulnerabilities; correct?

12 **A.** I do not recall any discussion about investigating the
13 system or its setup in that nature.

14 **Q.** You don't recall participating in any discussions
15 regarding any potential effort to determine the extent of those
16 vulnerabilities; correct?

17 **A.** I do not recall.

18 **Q.** You don't recall participating in any discussions to
19 determine whether there was any additional unauthorized access
20 to the system; correct?

21 **A.** I do not recall.

22 **Q.** The DRE memory cards that are used in Georgia's elections,
23 they have not been collected by the state for any potential
24 testing or reformatting since 2013 or 2015; is that correct?

25 **A.** That is correct.

1 **Q.** The internal memory of the DRE voting machines themselves
2 has never been tested or checked in any way; is that correct?

3 **A.** The internal memory -- the election files that are
4 collected after each election, in some cases the county may
5 have to access that file and bring it forward, if something
6 happened to a memory card that had been previously in use for
7 an election.

8 But has there been an inspection of that by the state?
9 No.

10 **Q.** Is it -- it is still part of your practice to load files
11 from the GEMS server on to a USB drive and to insert that drive
12 into a Secretary of State public computer; correct?

13 **A.** That is correct.

14 **Q.** That computer is connected to the internet; right?

15 **A.** The Secretary of State's computer, yes.

16 **Q.** And after inserting that USB into the internet-facing
17 computer, you will insert it back into the GEMS server; right?

18 **A.** Only after it is reformatted on the public computer after
19 we have moved the file from the GEMS computer to the public
20 computer for distribution to the county, particularly like a
21 PDF file or reports that the county may need. After that file
22 has been moved over to the public side, the USB drive that has
23 been inserted into the public computer is then reformatted.

24 **Q.** And then reinserted back into the GEMS server?

25 **A.** After it is reformatted on the public, it is then at a

1 later point in time inserted back into the private system.

2 **Q.** Thank you. I would like to hand you what we'll mark as
3 Exhibit 4 -- Exhibit 4.

4 MS. BENTROTT: And for the record, this is Senate
5 findings -- a summary of Senate findings called Russian
6 Targeting of Election Infrastructure During the 2016 Election,
7 Summary of Initial Findings and Recommendations, dated May 8,
8 2018.

9 **Q. (BY MS. BENTROTT)** And you can see in the section on the
10 first page summary of initial findings the first bullet reads,
11 at least 18 states had election systems targeted by
12 Russian-affiliated cyber actors in some fashion.

13 Do you see that finding?

14 **A.** I do.

15 **Q.** And in the second bullet, it says almost all of the states
16 that were targeted observed vulnerability scanning directed at
17 their Secretary of State websites or voter registration
18 infrastructure.

19 Do you see that finding as well?

20 **A.** I do.

21 **Q.** Neither of these findings has changed your operations in
22 any way; correct?

23 **A.** That is correct.

24 **Q.** You testified in your deposition that you weren't aware of
25 any current or previous lapses in security in Georgia's voting

1 system.

2 Is that still true today?

3 **A.** Yes.

4 **Q.** You testified in your deposition -- you testified in your
5 deposition that you weren't aware of any current or previous
6 failures in security protocol with respect to Georgia's
7 election system.

8 Is that still true today?

9 **A.** Yes.

10 **Q.** Has anyone provided you with a copy of the deposition
11 transcript of the state's expert witness, Dr. Shamos?

12 **A.** I have not seen that deposition, no.

13 **Q.** As you sit here, you don't have any concerns about the
14 security of Georgia's DRE system given everything you have
15 learned?

16 **A.** My understanding of the system in whole in relation to how
17 we set up our operations within our -- within my office and how
18 counties do a diligent job of executing their operations at the
19 local level, I feel confident in Georgia's voting system, yes.

20 **Q.** For the software that is used on the Diebold -- Diebold or
21 Diebold (different pronunciation)?

22 **A.** Diebold.

23 **Q.** -- Diebold DREs, is the license with ES&S?

24 **A.** I believe the license was procured through -- by ES&S
25 through a divestiture of the Premier Solutions in, I believe it

1 was, 2010.

2 **Q.** For the software that is used in GEMS, is that licensed
3 with ES&S?

4 **A.** I honestly do not know the answer to that question.
5 Because in the divestiture, it was dealing with two separate
6 vendors. I don't know if the license for GEMS is held by ES&S
7 or if it is held by Dominion.

8 MS. BENTROTT: Thank you. No further questions.

9 And for the record, we would like to enter Exhibit 4
10 into the evidence.

11 THE COURT: Any objection?

12 MR. RUSSO: No.

13 THE COURT: Exhibit 4 is admitted.

14 And my understanding was you were -- are you
15 tendering Exhibits 1 through 3, Mr. Cross?

16 MS. BENTROTT: Yes.

17 MR. CROSS: I'm sorry, Your Honor?

18 THE COURT: Were you tendering Exhibits 1 through 3?

19 MR. CROSS: Yes. I was going to move them all in at
20 some time.

21 THE COURT: I understood the state wanted to redact
22 some portions. But as a whole, are 1 through 3 subject to
23 whatever redactions necessary for the public record?

24 MR. TYSON: Yes, Your Honor. That was our concern.

25 Thank you.

1 THE COURT: The Court will retain the full record.
2 Okay. Then 1 through 4 are admitted with that caveat.

3 CROSS-EXAMINATION

4 BY MR. BROWN:

5 **Q.** Mr. Barnes, Bruce Brown. We have met.

6 You were describing in your direct testimony the paper
7 ballot scans going back and forth. The ballots that you
8 currently compose at the Secretary of State's office, that is
9 the same design that goes straight to a ballot printer;
10 correct?

11 **A.** The images that are produced from the database for
12 proofing purposes, those PDF files, once a county has signed
13 off on that image, that ballot layout and ballot content, then
14 PDF images are generated and forwarded to the county's
15 contracted ballot printer.

16 **Q.** So if the county wanted to switch to hand paper --
17 hand-marked paper ballots, let's say, at least for the ballot
18 they would just simply need to increase the volume of the order
19 with the printer? It would already be composed?

20 **A.** Well, there would be some other things besides the number
21 of ballots that would have to be ordered by the county. There
22 would be some structural changes that would have to be made to
23 the underlying GEMS database in relation to how ballots are
24 tabulated.

25 Under state statute, ballots have to be tabulated at the

1 precinct level. For advance voting, for mail-out absentee,
2 everything has to be tabulated at the precinct level. So the
3 system would have to be configured so that a scanner could be
4 configured to when it receives an election day ballot if it
5 were on paper that it routes that vote to an election day
6 precinct for its count tabulation.

7 **Q.** And that is a reprogram that you would be capable of
8 doing; correct?

9 **A.** That is a step within the database that we are familiar
10 with setting, yes.

11 **Q.** Thank you. Now, I want to go back a minute to -- well,
12 let me back up a little bit. You were describing in your
13 direct testimony and in your deposition testimony that the
14 Secretary of State's office does the ballot building for all
15 the counties; correct?

16 **A.** Uh-huh (affirmative). Correct.

17 **Q.** And that there are a handful of municipalities that would
18 contract separately to have their ballots built; is that
19 correct?

20 **A.** Yes. There are -- excuse me. There are a handful of
21 municipalities that own their own DRE equipment. And to
22 execute their election, they are required to contract with the
23 vendor for the development of the necessary database and for
24 the production of the election media that is needed to then
25 power those devices.

1 Q. And if you -- but to sort of cut to the chase, your office
2 provides the programming and configuration for GEMS databases
3 and for the ballots for a vast majority of the elections in
4 Georgia; correct?

5 A. That is correct.

6 Q. And that would include all county elections?

7 A. That is correct.

8 Q. And all municipal elections when the municipality is
9 having the Secretary of State either directly or through the
10 county program and configure its database; correct?

11 A. The relationship is between the municipality and county.
12 That is where that is governed. The Secretary of State -- we
13 provide support for election ballot building for county
14 elections offices. If county elections offices then contract
15 with municipalities to execute the municipality election, then
16 the Secretary of State's office through my division is building
17 the database to provide to the county for that purpose.

18 Q. Are you familiar with the state's contract with -- ES&S's
19 contract for ballot building support services?

20 A. I am.

21 Q. Mr. Barnes, what does ES&S do pursuant to that contract?

22 A. They assist my division in constructing the GEMS databases
23 that are used within county elections.

24 Q. And so the state is outsourcing the building of the
25 ballots; is that right?

1 **A.** We are using ES&S as a contractor to help us assist in
2 that production.

3 **Q.** And I believe the contract for 2019 is for \$150,000; is
4 that right?

5 **A.** I believe that is correct, yes.

6 **Q.** How many full-time people is that from ES&S that are
7 actually working on Georgia ballots?

8 **A.** I believe ES&S has three individuals that work solely on
9 Georgia election databases.

10 **Q.** And that would be in addition to the individuals in your
11 office?

12 **A.** That would be in addition to the individuals in my office,
13 yes.

14 **Q.** Okay. And so does ES&S actually sit in your office and do
15 this ballot building work?

16 **A.** They do not.

17 **Q.** Where do they do their ballot building work?

18 **A.** They do their ballot building work within their own
19 purviews. We provided to ES&S when this contract was initially
20 put together specifications on how that hardware must be
21 configured, also with a specific image of build for that
22 specific unit that they would be using to construct those
23 databases.

24 **Q.** So -- and where is this done? Omaha?

25 **A.** No. It is all done within the State of Georgia. It is

1 all done within -- I believe the individuals work from home.

2 **Q.** So we have individuals from an outside contractor working
3 at home on their own PCs on Georgia's GEMS databases, which
4 program the ballots for all of Georgia's elections; is that
5 correct?

6 **A.** We have three individuals, two of whom were previously
7 employees of mine at the Center for Election Systems with over
8 a decade's experience in building GEMS databases. And then the
9 third individual is a former county elections official from
10 Cobb County with over 25 years of experience in Georgia
11 elections.

12 **Q.** I understand their experience. But they are at home
13 working on their laptop, I guess, designing --

14 **A.** It is not a laptop.

15 **Q.** Or a PC. It is a desktop; right?

16 **A.** It is a desktop, yes.

17 **Q.** They are working on a desktop. And they are designing and
18 they are configuring the GEMS databases, which basically
19 determine how a voter's choice at that electronic string gets
20 transmitted into the tabulations; correct?

21 **A.** They are constructing the database, yes, sir.

22 **Q.** Okay. And do you know what sort of security they have in
23 their homes?

24 **A.** They are under the same purviews as we are in relation to
25 their equipment, that it must be air gapped as our equipment

1 for ballot building purposes is. And they deliver --
2 hand-deliver those copies of databases to the Secretary of
3 State's office for direct inspection.

4 Once those databases come into our possession, they are
5 not then returned back to ES&S if any corrections or any issues
6 are found within the database. All corrections to issues found
7 are then corrected within our office, reviewed by members of my
8 staff, and then images provided to direct counties for
9 inspection.

10 **Q.** Do they have any particular physical security at their
11 homes or garages where they are doing this work for the State
12 of Georgia's voting system?

13 **A.** I don't know which -- I don't know what security
14 parameters each individual has within their home.

15 **Q.** Okay. And do you recall the protocols that the Judge in
16 this case approved for our experts' handling of the GEMS
17 databases? Were you involved in that?

18 **A.** Only tangentially.

19 **Q.** Do you recall that it was in a special room at the
20 University of Michigan with tight security and videotape? Do
21 you recall all of those?

22 **A.** I do.

23 **Q.** Are any of those protections or security measures taken
24 with respect to the three individuals who do not even work for
25 the Secretary of State at their homes or garages while they are

1 working on the GEMS databases?

2 **A.** I do not know.

3 **Q.** Do you know the security checks that these three
4 individuals have gone through -- any sort of security checks?

5 **A.** I know that previously the two employees that worked with
6 me had gone through security checks. I'm not aware if the
7 third individual had gone through any security checks at Cobb
8 County. I would assume so considering what her position was.
9 But I do not know.

10 **Q.** And can you give me those names, please?

11 **A.** The three individuals, [REDACTED], who was a former
12 employee of mine; [REDACTED], who was a former employee of
13 mine, and [REDACTED].

14 THE COURT: Were they employees at the state, or were
15 they employees at Kennesaw?

16 THE WITNESS: They -- [REDACTED] and [REDACTED] were
17 employees at Kennesaw State University.

18 THE COURT: Thank you.

19 **Q.** **(BY MR. BROWN)** Mr. Barnes, I want to ask you a couple of
20 questions that we have gone over before with respect to the
21 sequence of events in 2016 and 2017.

22 And do you recall that the testimony was that in August
23 you learned of Mr. Lamb's access to the Kennesaw elections
24 server; correct?

25 **A.** Again, I recall that he made a phone call to my boss at

1 the time, Mr. Merle King, stating that he through his wanting
2 to assist with security efforts had gone to
3 elections.kennesaw.edu and looked at the website and isolated
4 areas that we may need to bring our attention to.

5 **Q.** And then in March you learned that another individual had
6 obtained access to the same server; correct?

7 **A.** That is correct.

8 **Q.** Okay. Let me hand to you what we will mark as Exhibit 5.

9 MR. CROSS: Your Honor, while Mr. Brown does this,
10 Dr. Halderman just raised an important point. The names that
11 were just identified, can we redact those from the public
12 record and you can direct people not to disclose those?
13 Because he makes a good point. We don't want to make these
14 people targets, given what we have heard about the level of
15 security.

16 THE COURT: Absolutely.

17 MR. BROWN: Thank you for that.

18 THE COURT: It will be redacted, and I would direct
19 everyone who is present here or who is listening in the
20 overflow courtroom to delete from your notes the names of the
21 individuals, including the reporters who are present. Thank
22 you.

23 MR. BROWN: Thank you very much, Mr. Cross.

24 **Q. (BY MR. BROWN)** Mr. Barnes, let me show you what has been
25 marked as Exhibit 5 -- Plaintiffs' Exhibit 5. And do you

1 recall receiving a copy of the email exchanges between
2 Mr. Stephen Gay and Merle King and others on or about March 1,
3 2017?

4 **A.** I do.

5 **Q.** And did you undertake at that time to determine in 2017
6 what files would have been accessible on the Kennesaw elections
7 server?

8 **A.** In 2017, I'm trying to recall the steps that were made
9 immediately after that. I think the request came or the
10 notification came in late on the day of March 1st, the original
11 email, late in the day on March 1st. When we arrived at the
12 office on March 2nd, then by early morning that time Stephen
13 Gay with KSU IT was present on-site to begin a review of what
14 may have transpired.

15 **Q.** Okay. And the email down here, if you look at the bottom
16 email, which would be the first one -- and the Bates number at
17 the bottom is CGG0000119.

18 THE COURT: I'm sorry. What are we looking at right
19 now?

20 MR. BROWN: This is Exhibit 5.

21 THE COURT: All right. Go ahead.

22 **Q.** **(BY MR. BROWN)** Mr. Barnes, who is Andy Green?

23 **A.** I do not know Mr. Green.

24 **Q.** But he appears to be associated with KSU; is that right?

25 **A.** That does appear to be the case.

1 Q. Do you see where he says that his friend shared with me
2 that the exposed directories contained, among other things,
3 voter registration detail files, including date of birth and
4 full Social Security numbers? Do you see that?

5 A. I do.

6 Q. And then Green says, I was able to verify its presence --
7 the presence of the vulnerability myself. Do you see that?

8 A. I do.

9 Q. And then if you -- if you move up to the next page --

10 THE COURT: Is there a third page, or are you going
11 back to Page 1?

12 MR. BROWN: I'm going back to Page 1. Thank you,
13 Your Honor. Sorry.

14 Q. **(BY MR. BROWN)** It would appear that -- who is Mr. Gay?

15 A. Mr. Gay was the head of Kennesaw State University's
16 information technology department.

17 Q. And it appears that he also confirmed the vulnerability;
18 is that correct?

19 A. I don't know if he personally confirmed it or someone with
20 his staff confirmed it. I'm unsure.

21 Q. But he was convinced that there was a vulnerability;
22 correct?

23 A. He immediately reached out to Mr. King to start to try to
24 remediate the problem.

25 Q. Okay. Now, let me hand you what has been marked as

1 Exhibit 6. What is Exhibit 6, Mr. Barnes?

2 **A.** It appears to be a write-up pulled together by my office
3 outlining the files that we believe to have been present on
4 elections.kennesaw.edu at the time.

5 **Q.** At the time that it had the vulnerability described by
6 Mr. Green and Mr. Gay; correct?

7 **A.** That is correct.

8 **Q.** And the list of files that you have here that were
9 exposed, these are illustrative; correct?

10 **A.** That is correct. This was for descriptive purposes to
11 educate KSU IT in relation to what was present.

12 **Q.** So you use Appling because I believe that is the first
13 county in the alphabet?

14 **A.** That is correct.

15 **Q.** And so for most of the counties, they would have some
16 folders that were exposed even though the folders may not be
17 populated; correct?

18 **A.** Correct. The folder was there. But there may or may not
19 have been data within the folder.

20 **Q.** And then what is the -- if you look on the second page,
21 what does the extension EXE mean to you on the file name?

22 **A.** Let's see. Which --

23 **Q.** Pickens County ExpressPoll ED files?

24 **A.** It is an executable file. In that particular file, the
25 EXP report file is a report file that resides on the compact

1 flash card of the ExpressPoll that allows the local
2 jurisdictions to produce a numbered list of voters post
3 election.

4 **Q.** And there were executable files of the GEMS databases on
5 here too; correct?

6 **A.** Not to my knowledge. There were not executables of GEMS.

7 **Q.** Were there demonstration databases?

8 **A.** There were, I believe, a demonstration database but not
9 GEMS, the executable. A GEMS file.

10 **Q.** A GEMS file?

11 **A.** Uh-huh (affirmative).

12 **Q.** That could be used with a GEMS database or imported into a
13 GEMS database?

14 **A.** A GEMS file would be read by a computer running GEMS.

15 **Q.** Read by a computer running GEMS. Thank you.

16 And then -- so I think -- and we went over this in your
17 deposition. But the -- there was a demonstration GEMS file;
18 correct?

19 **A.** There was. I don't remember to which county I may have
20 posted that file. But there was.

21 **Q.** Now, let me go ahead a little bit from the 2017 time frame
22 and move forward. Did there come a time when you got I think
23 what is called a litigation hold letter from the Attorney
24 General's office notifying you about the existence of lawsuits
25 and the need for you and your office to preserve any relevant

1 evidence or something to that effect?

2 **A.** I don't know if I ever received a physical letter or a
3 physical email from the Attorney General's office. I know that
4 we had received phone calls from the Attorney General's office
5 or from KSU legal office in relation to making sure we maintain
6 our records that we had possession of.

7 **Q.** And after you received that notice, KSU wiped the server
8 that was exposed for an uncertain number of months to the
9 internet; correct?

10 **A.** I don't know exactly what time or what day KSU did that
11 impact to that server. It was in their total possession at the
12 time. We were following within my office -- the CES office at
13 Kennesaw State following what counsel was telling us, to hold
14 everything in our control.

15 **Q.** And your testimony is because -- wait. In your control.
16 So you didn't have control over it even though it was an
17 election server; is that right?

18 **A.** KSU had taken possession of that being that it was KSU
19 hardware.

20 **Q.** Okay. And so -- and you didn't -- when you got the
21 notification from the Attorney General that there was
22 litigation and that you needed to preserve evidence, you didn't
23 reach out to KSU and say, hey, wait a minute, you have got the
24 server that's the heart of this litigation, don't do anything
25 with that? You didn't say anything to that effect, did you?

1 **A.** I assumed that if the Attorney General's office is
2 directly calling me they are also directly calling KSU legal
3 counsel and providing that same information --

4 **Q.** And you --

5 **A.** -- and then further assumed that KSU legal is making sure
6 that other departments that are affected with this process
7 would be notified of that order.

8 **Q.** And do you know whether KSU got the memo, so-to-speak?

9 **A.** I do not know.

10 **Q.** And for all you know, the only existing source of
11 information about what was on that server would be your memo,
12 which is Exhibit 6, and Logan Lamb's memory, which we have in a
13 declaration; correct?

14 **A.** Excuse me. I believe the FBI also had taken an image of
15 that server.

16 **Q.** Right. And that is an image that they have now; correct?

17 **A.** That is my understanding, yes, sir.

18 **Q.** And that -- well, it is subject to discovery. That is not
19 something that is your -- that is not in your bailiwick.

20 But as far as you know, there is no other copy around;
21 correct?

22 **A.** That is correct. To my knowledge, I do not know of
23 another copy.

24 **Q.** And then at some point, there was a second server that
25 also was wiped; correct?

1 **A.** I believe there was a second box that KSU IT had taken
2 possession of from the center. And then again, because it was
3 KSU property, it was under their control and their protocols.

4 **Q.** You testified in response to the direct that there has
5 been -- this is a different topic. I don't want to switch
6 gears too quickly -- but that there has been no inspection of
7 the memory cards themselves.

8 Do you recall that testimony?

9 **A.** Yes.

10 **Q.** And how many memory cards are we talking about?
11 Thousands; right?

12 **A.** Each jurisdiction has in most cases two memory cards per
13 voting device. They have 125 megabyte -- a 128-megabyte card
14 and a 48- to 64-megabyte card. So there are approximately
15 27,000 DREs. So 27,000 times 2.

16 **Q.** So over 50,000 memory cards out there that have not been
17 wiped; is that correct?

18 **A.** They have not been wiped by the state. That doesn't mean
19 that they haven't been wiped by a local jurisdiction.

20 **Q.** I understand. Let's go back to your USB drive that you
21 use your ownself.

22 Do you ever attempt to verify that the USB drive has
23 actually been formatted on another -- reformatted by inserting
24 it into another computer?

25 **A.** Every time I work with a drive, when I'm completely

1 finished with running it, I do a formatting of the drive. And
2 if I have any doubt of that, I format it before I use it.

3 **Q.** Do you take it to another computer to test to see whether
4 it has actually been reformatted?

5 **A.** I've got access to multiple computers. But my normal
6 practice is my public computer is used for reformatting. And
7 before I insert it into my private system, if I have any
8 question about that device, I go back to my public computer and
9 do a reformatting.

10 **Q.** Are you aware that there is malware or if there is malware
11 that can disguise or prevent actual reformatting of USB drives
12 and you will never see it if you use the same computer?

13 **A.** I am not.

14 MR. BROWN: That's all I have, Your Honor.

15 DIRECT EXAMINATION

16 BY MR. RUSSO:

17 **Q.** Good morning, Mr. Barnes.

18 **A.** Good morning.

19 **Q.** With regard to county GEMS databases, can you explain to
20 us how -- well, what happens when a county sends a GEMS
21 database back to the Secretary of State's office?

22 **A.** As part of the certification results that the Secretary of
23 State's office has to obtain from the county, one of those
24 portions is a copy of the county's GEMS database containing all
25 of the election results.

1 When that GEMS database is received, it is received by the
2 Secretary of State and it is held by the Secretary of State.
3 It is not loaded back into the private GEMS system. It is
4 solely held as a record for the Secretary of State that if
5 there is need to examine it they have the CD and can have
6 access to the database. But it is not loaded back into the
7 system.

8 **Q.** And if the Secretary of State's office wanted to review a
9 county GEMS database, what would the office do?

10 **A.** We would pull an isolated GEMS computer that is not even
11 connected to the state private system, plug it in external to
12 any device, load the database into that system, and produce
13 whatever report the state may need.

14 **Q.** So a county GEMS database wouldn't be uploaded into the
15 state's GEMS database?

16 **A.** That is correct.

17 **Q.** It would be uploaded to a separate server?

18 **A.** It wouldn't be uploaded on a server at all. It would just
19 be housed on a single device.

20 **Q.** So if there was any malicious software that was on a
21 county GEMS server, it wouldn't ever go back into the state's
22 GEMS database?

23 **A.** Correct.

24 MS. BENTROTT: Objection. Leading.

25 THE COURT: I'm going to allow it. But be careful.

1 **Q.** (BY MR. RUSSO) What was your role at the Center of
2 Elections while you were at Kennesaw State?

3 **A.** My role was overseeing the daily operations and developing
4 and building the data sets that were used by counties. I
5 basically made sure that whatever county was needing that is
6 what our office was producing.

7 **Q.** At the time of the alleged incident with Mr. Lamb, were
8 you the head of Center for Election Systems at the time?

9 **A.** I was the director, but I had a boss, and he was the
10 executive director, and that was Mr. King.

11 **Q.** And you weren't involved in any investigations of that
12 incident while you were there?

13 MS. BENTROTT: Objection. Leading.

14 **Q.** (BY MR. RUSSO) Were you involved in any investigation
15 while you were there?

16 **A.** I was not.

17 **Q.** And are you aware of what the state did or Secretary of
18 State's office did when the Center of Elections was
19 transitioned over?

20 **A.** When the Center for Elections Systems was transferred over
21 to the Secretary of State's office, the Secretary of State's
22 office did a complete build from ground up of a new private
23 system, which the GEMS system would be held on. So whole new
24 hardware, whole new operating system, whole new configuration.

25 **Q.** So you spoke earlier regarding the ballot building

1 process. Can you walk us through the ballot building process
2 as it is today?

3 **A.** The ballot building process as it sits today, I have a
4 staff of myself and three other employees. And when the ballot
5 building process is occurring, counties first have to notify
6 the state whether there is going to be an election, whether it
7 is a municipal election this year or a special called election.
8 And they provide information to their elections liaisons at the
9 Secretary of State's office detailing when the election is
10 going to be held, when qualifying for the election would be.

11 And then that information is also passed forward to the
12 Center for Election Systems where we collect that information
13 and create a folder containing that information in relation to
14 the race and to the election.

15 And then depending upon the number of databases that have
16 to be built for a specific election -- so, for example, in June
17 elections of this past year, there were only a handful -- I
18 think maybe 10 or 12 that have to be constructed. Due to that
19 low volume, we were able to construct those databases locally
20 within the Center for Election Systems. We did not have to ask
21 ES&S to help us with those.

22 So we take the information in from the county, construct
23 the GEMS database, pull the data into that data set that the
24 county needs, then produce PDF reports, PDF ballot images that
25 are then shared to the counties through upload to the Secretary

1 of State's FTP site.

2 The county has access to that data set. They review it.
3 If they approve it, then they provide a signature that then
4 allows us to release the database to that jurisdiction.

5 THE COURT: The database being the ballot information
6 or the voter information or both?

7 THE WITNESS: At this point in time, there is no
8 voter information within it. The only thing that my office is
9 releasing is a copy of the GEMS database. And that is a --
10 that is placed onto a CD. And the database has a password
11 activity. But the CD itself is also password protected.

12 The CD is then distributed to the jurisdiction. Once
13 they receive the CD, the jurisdiction has to call my office and
14 identify themselves and also provide a code that is printed on
15 to the CD. If we know the person calling and they provide the
16 right code, then we will provide them the password to access
17 the database. They then load that to their local computer and
18 then produce the needed election media devices to power their
19 touchscreens.

20 **Q. (BY MR. RUSSO)** Is that the same process that is used for
21 building a ballot that would go on -- that would be used for an
22 optical scan machine?

23 **A.** Yes. We would go through the exact same protocols, yes.

24 **Q.** Now, earlier you were asked by plaintiffs' counsel about a
25 USB drive. Is that -- do you know -- is that USB drive a

1 locked USB drive?

2 **A.** It is a lockable USB drive, yes.

3 **Q.** And can you -- could you walk us through the process that
4 you go through when you are taking data and putting it onto the
5 USB drive.

6 **A.** Right. First off, start off with a drive. Verify that it
7 has been formatted. I do that on my public-facing computer, my
8 SOS public-facing computer. Format the drive. Once the drive
9 has been formatted, then I remove it from the public computer
10 and proceed to my private computer on the private GEMS system.

11 Then the data files are copied from the GEMS computer and
12 placed onto the USB drive. The USB drive is then removed from
13 the private drive and then placed into its locked position. It
14 is then transferred -- pulled over to the public computer --
15 inserted into the public computer. And then the files are
16 copied from that drive onto the public computer for
17 distribution to counties.

18 Once that process is completed, then we unlock the drive
19 and then format the drive.

20 **Q.** Now, when the drive is inserted into the internet-facing
21 computer, is it -- do you know if it is scanned for malware at
22 that point?

23 **A.** It is my understanding that the Secretary of State's
24 office has a protocol in place that for any drive that is
25 inserted it is immediately scanned.

1 MS. BENTROTT: Objection. Lacks foundation.

2 THE COURT: Is it an understanding based on -- do you
3 have personal knowledge, or has somebody else told you that?

4 THE WITNESS: My Secretary of State's IT office has
5 told us that every drive that is placed in whether it is --

6 THE COURT: All right. But that is based on some
7 information they provided to you?

8 THE WITNESS: Yes.

9 THE COURT: You haven't been present? You haven't
10 observed that yourself?

11 THE WITNESS: When I insert a USB drive, there is
12 always something that pops up that gives us indication that
13 something has taken place with that drive.

14 THE COURT: All right. So that is the basis of your
15 knowledge?

16 THE WITNESS: Yes.

17 THE COURT: You don't have any personal knowledge
18 from having participated in this over at the Secretary of
19 State's office?

20 THE WITNESS: Correct.

21 THE COURT: All right.

22 **Q. (BY MR. RUSSO)** Do you know if there are any other
23 restrictions that are in place on the Secretary of State's
24 network for pulling -- when you want to pull data onto that USB
25 drive?

1 **A.** Again, my understanding of what we have been educated by
2 our IT office is that any time that a file is generated and
3 generated by, say, for example, eNet -- when we have to pull
4 data files from eNet for ExpressPoll purposes, that when that
5 data file is built it is scanned for malware. And then when it
6 is transitioned to a jump drive, it is then encrypted
7 information. Because all data that comes off of the SOS public
8 computers, that data must be encrypted in order to be moved.

9 MS. BENTROTT: Same objection, Your Honor. Lacks
10 foundation.

11 THE COURT: All right. I'm going to strike that
12 unless you can create a foundation.

13 **Q. (BY MR. RUSSO)** Is there anything that you need to click
14 on your computer screen to --

15 MS. BENTROTT: Objection. Leading the witness.

16 THE COURT: All right. I just need him to explain
17 what he -- the basis of his testimony.

18 MR. RUSSO: That is what I'm trying to ask him.

19 THE COURT: Just don't lead.

20 **Q. (BY MR. RUSSO)** Whenever he is trying to transfer files
21 over, do you click on anything that indicates it has been
22 encrypted?

23 MS. BENTROTT: Objection. Leading.

24 MR. RUSSO: Well, I'm asking him.

25 THE COURT: We're going through a lot of leading

1 questions. Just simply: What is the basis of your testimony
2 as to the eNet data?

3 THE WITNESS: When I have copied data from my public
4 computer onto a jump drive, if I take that jump drive over to
5 my private computer, in order to -- in order for the data to be
6 read by my private computer, I first have to put in a password
7 on my jump drive that allows access to the data.

8 THE COURT: All right. So you understand that
9 that -- that is the system at least relative to your experience
10 of it?

11 THE WITNESS: If I -- I first have to put a password
12 in to access the drive. Once I have accessed the drive, I
13 actually have to launch an executable within the folder. If I
14 don't launch the executable within the drive folder, if I just
15 move the file over, just literally drag it, it is unreadable.

16 So that is my understanding of it being encrypted.
17 That I actually have to run a process to launch the decryption.

18 THE COURT: Do you know that that is the process for
19 anyone else or not?

20 THE WITNESS: That is the process for all SOS
21 employees when moving data from the public computer to any
22 other computer.

23 THE COURT: Okay. Does this -- are these eNet files
24 also sent to county personnel?

25 THE WITNESS: County election officials have access

1 to eNet. But the data files that I'm speaking of are the data
2 files that are used to produce the electors' list that is seen
3 on ExpressPoll within the polling location.

4 THE COURT: Go ahead.

5 **Q. (BY MR. RUSSO)** Mr. Barnes, are you familiar with the
6 state's contract with ES&S for ballot building?

7 **A.** I am.

8 **Q.** And do you know if that contract has any security measures
9 in it to ensure that the ballot building process follows the
10 state's current procedures?

11 **A.** I believe it does.

12 MR. RUSSO: No further questions, Your Honor.

13 THE COURT: Have you reviewed the contract?

14 THE WITNESS: Yes, ma'am. I believe it is about four
15 or five pages in length with a very detailed section in
16 relation to what security requirements they are to uphold.

17 MR. RUSSO: Thank you.

18 THE COURT: Could I just ask a few questions that are
19 follow-up. And, again, they don't count against anyone. And
20 take a minute for my questioning as it is off beforehand.

21 EXAMINATION

22 BY THE COURT:

23 **Q.** Do you have any familiarity with the contract between the
24 Georgia Secretary of State's office and PCC?

25 **A.** No, ma'am, I do not.

1 Q. And are you involved in the voter registration database at
2 all?

3 A. I have access to the voter registration database in order
4 to obtain files to build the electronic data set for
5 ExpressPoll, but I do not work in the voter registration
6 division.

7 Q. All right. But the data from the -- that is being
8 manipulated or in the past was manipulated on the software and
9 operations of PCC, would that be transferable then to the
10 Secretary of State's office?

11 A. I do not know.

12 THE COURT: All right. Thank you very much.

13 MS. BURWELL: No questions, Your Honor.

14 MS. BENTROTT: Some redirect, Your Honor.

15 THE COURT: All right.

16 RE-CROSS-EXAMINATION

17 BY MS. BENTROTT:

18 Q. Thank you, Mr. Barnes. When you plug the USB drive into
19 your public-facing computer to reformat it, you have to unlock
20 the USB drive; correct?

21 A. After I have placed the locked drive into the computer to
22 move -- copy the files over, I then remove the unlocked
23 drive -- I remove the locked drive, switch it to unlocked,
24 reinsert the drive back into the public computer, and then do
25 my formatting.

1 Q. And that is true for the USB drive that you plug into the
2 GEMS servers; correct?

3 A. That is the -- yes. It is formatted on the public side
4 before it is placed back into the private side.

5 MS. BENTROTT: Thank you. Nothing further.

6 THE COURT: May this witness step down?

7 MR. BROWN: No further questions, Your Honor.

8 THE COURT: Thank you very much.

9 I just want to get back again to the contract between
10 the Secretary of State's office and the PCC. I don't know
11 whether the contract that just renewed is the same contract
12 other than date frame as the one that was reviewed in the cyber
13 risk assessment of 2018. But if it is the same other than the
14 time frame, I don't need to see the one that was looked at in
15 2018. But if it is a different one, I'll need both.

16 MR. TYSON: Okay. And, Your Honor, on that point, in
17 communicating with the Secretary of State's office, there are
18 some changes regarding the hosting obligation. So it will be
19 different. But the belief is that the auditing functions were
20 included. So we're going to go ahead and get that for you.

21 THE COURT: Okay. Thank you very much.

22 MR. BROWN: Your Honor, Bruce Brown. We were going
23 to -- I was going to reference this in my opening. But this
24 relates to the testimony of Mr. Barnes. With your permission,
25 we're going to serve and file a hearing brief on evidentiary

1 presumption arising from spoliation of evidence just for -- for
2 review in light of the testimony of Mr. Barnes and everything
3 else that is in the record on that particular issue.

4 THE COURT: All right.

5 MR. BROWN: Thank you, Your Honor. Then we have --
6 I'm not sure what time it is. We have one short witness that
7 we can get up and down before 1:00. They will be very short if
8 that is all right.

9 THE COURT: Okay. Let's get the witness in.

10 MR. BROWN: The plaintiffs would call Jasmine
11 Clark -- I'm sorry. Teri Adams.

12 THE COURT: Is Teri Adams fast also?

13 MR. BROWN: We have several fast ones. The
14 plaintiffs would call Teri Adams, Your Honor.

15 THE COURT: Would you announce your presence. I
16 think we didn't have it.

17 MR. BRODY: Good morning, Your Honor. David Brody
18 from the Lawyers' Committee for Civil Rights on behalf of
19 Coalition plaintiffs.

20 COURTROOM DEPUTY CLERK: Please raise your right
21 hand.

22 **(Witness sworn)**

23 COURTROOM DEPUTY CLERK: Please have a seat. Loudly
24 and clearly state your name, and spell your last name for the
25 record, please.

1 THE WITNESS: Teri Adams.

2 COURTROOM DEPUTY CLERK: In the mic, please.

3 THE WITNESS: I'm Teri Adams.

4 Whereupon,

5 TERI ADAMS,

6 after having been first duly sworn, testified as follows:

7 DIRECT EXAMINATION

8 BY MR. BRODY:

9 Q. Good morning, Ms. Adams. Are you registered to vote in
10 Georgia?

11 A. Yes.

12 Q. Did you vote in the November 2018 federal election?

13 A. Yes.

14 Q. When did you vote?

15 A. November 2018 election I voted early in October.

16 Q. Where did you vote?

17 A. At the Bleckley County Courthouse.

18 Q. When you voted, did you use an electronic voting machine
19 or paper ballots?

20 A. It was an electronic voting machine.

21 Q. Did you experience any problems voting?

22 A. Yes.

23 Q. Could you please describe those.

24 A. I went and voted -- it is a small town -- to courthouse
25 early vote and cast my ballot. When you get to the end, it

1 asks you to verify. And so I always verify because I'm a
2 retired teacher so I'm going to verify. And it had changed one
3 of my votes.

4 **Q.** Which vote did it change?

5 **A.** It changed my vote for Stacey Abrams to Kemp.

6 **Q.** And what did you do?

7 **A.** I thought, well, I made the mistake, so I went back, and I
8 changed it again. And I went to verify again, and it had
9 changed back.

10 **Q.** What did you do after that?

11 **A.** I changed it again. And I verified then, and it stayed
12 that time.

13 **Q.** And so when you went back to change it the third time, did
14 you do anything different from when you voted -- when you
15 selected the first two times?

16 **A.** No. No.

17 **Q.** So you did the exact same thing?

18 **A.** Yes.

19 **Q.** Do you know whether your vote was ultimately counted
20 correctly?

21 **A.** I have no way of knowing. I don't know.

22 **Q.** Did you tell anyone at the polling station about your
23 problem?

24 **A.** Not that day because I was in a hurry going to the
25 supermarket and doing stuff. I thought, well, it was my

1 mistake. But then over the weekend, I started seeing news
2 stories about people having problems. I was like, wait a
3 second, I did. So I went back to the courthouse, and I told
4 the two ladies who were there that day that I voted the
5 problems I had experienced. And she said, well, did it take
6 your vote? I said yes, after the third time. And she said,
7 well, it took your vote then; right? I said, yeah, after the
8 third time. She said, well, you're fine then. Okay.

9 **Q.** But you don't know necessarily if it was correctly
10 counted?

11 **A.** I have no idea.

12 MR. BRODY: Thank you.

13 MR. CROSS: No questions, Your Honor.

14 THE COURT: What county was this again?

15 THE WITNESS: Pardon me?

16 THE COURT: What county was this?

17 THE WITNESS: Bleckley.

18 **(There was a brief pause in the proceedings.)**

19 CROSS-EXAMINATION

20 BY MR. LAKE:

21 **Q.** I will be brief. Brian Lake on behalf of the state
22 defendants. I just have a few follow-up questions.

23 At the time you say that you had selected Ms. Abrams and
24 on the review screen it had changed to Kemp, when you initially
25 selected Ms. Abrams on that screen, did it show Ms. Abrams had

1 been selected?

2 **A.** After I went to verify, no.

3 **Q.** Maybe I'm not asking this the right way. When you made
4 your initial selection --

5 THE COURT: Watch out in terms of the feedback.
6 Just -- it is on a strong volume so that anyone in the overflow
7 room can also hear.

8 MR. LAKE: Understood.

9 **Q.** **(BY MR. LAKE)** When you selected Ms. Abrams on the initial
10 screen, did you see that it registered Ms. Abrams on that
11 screen?

12 **A.** Yes.

13 **Q.** And it was only upon the review screen that you saw that
14 it was --

15 **A.** Yes.

16 **Q.** -- Kemp? And on the third attempt as you say when you
17 selected Ms. Abrams, it did register on the review screen?

18 **A.** On the third, yes.

19 **Q.** Okay. Just so I'm clear on afterwards, you say you
20 didn't -- you didn't mention it to the poll workers at the
21 time --

22 **A.** No.

23 **Q.** -- of the incident? The two ladies you spoke to later on
24 at the courthouse, are those -- who were those ladies?

25 **A.** The same ladies -- I don't know one of them's name. But

1 the other one I have known for years. Her last name is Witte.

2 I have known them both for years. I have seen them up there.

3 **Q.** Were those ladies poll workers on the day in question?

4 **A.** Yes.

5 **Q.** Okay. And after that -- after you spoke to those poll
6 workers, did you talk to anyone else about the incident?

7 **A.** Not for about a week I guess. And then I saw a number for
8 people to call to vote -- to report voter irregularities. And
9 I called the number.

10 **Q.** What number was that?

11 **A.** I don't remember the phone number.

12 **Q.** Do you know if that number was to the Secretary of State's
13 office?

14 **A.** No, I don't.

15 **Q.** And in terms of providing your declaration in this case --
16 maybe I should ask. Did you provide a declaration?

17 **A.** Yes.

18 **Q.** Were you contacted to provide that declaration, or did you
19 reach out to someone else to provide it?

20 **A.** I made the initial phone call. And awhile later, someone
21 called me --

22 **Q.** Okay.

23 **A.** -- and asked me if I could give a declaration that could
24 be notarized.

25 **Q.** Okay. So the declaration that you were asked to execute

1 in this case or to execute was a follow-up of the initial call
2 that you had made?

3 **A.** Yes.

4 MR. LAKE: Okay. I believe that is all I have, Your
5 Honor.

6 THE COURT: Thank you.

7 MR. BRODY: Nothing further.

8 THE COURT: You can step down.

9 All right. I think this is a good time to take a
10 break. I'm going to just keep on running pretty tight here.
11 So we're going to take a -- be back at 25 after 1:00. Yes.

12 MR. ICHTER: Your Honor, Cary Ichter for the
13 individual Coalition plaintiffs. And since it appears as
14 though they are ably represented here, I was wondering if I
15 could be excused.

16 THE COURT: Yes, you can be.

17 All right. I did want to say one thing. I don't
18 know how many people are in the overflow courtroom. Even
19 though it is not very comfortable to be in the corners on the
20 far over here, I do think that if you-all are able to move some
21 it would be -- if there is any more room on your row it would
22 be courteous -- some of you may be just leaving, and that will
23 take care of things. But I hate to have people come to the
24 courthouse and not be able to have some -- be able to sit in
25 the courtroom at all.

1 All right. So we'll see you in one half hour at 25
2 after 1:00.

3 COURTROOM SECURITY OFFICER: All rise.

4 **(A lunch break was taken.)**

5 THE COURT: Have a seat. Sorry to do this. But I
6 would -- when I took the break, I realized I wasn't 100 percent
7 sure I understood precisely what Mr. Barnes said about the
8 process on using the drive and the use of the contractors. And
9 I wondered -- I would just like him to come back to speak to me
10 for a few minutes. So if Mr. Barnes would be recalled if he is
11 still here.

12 MR. RUSSO: He has left already. But we'll call him.
13 He is down the road.

14 THE COURT: Okay. We could start with -- so he has
15 left the courthouse?

16 MR. RUSSO: Yes. We told him --

17 THE COURT: He was free until I -- all right. Very
18 good. I thought he was your representative, so he was going to
19 be here.

20 MR. RUSSO: They are trying to get some things done.

21 THE COURT: That's fine. If he could just come back
22 sometime this afternoon.

23 Who is the next witness?

24 MR. BROWN: Your Honor, the plaintiffs would call
25 Amber McReynolds.

1 THE COURT: I would like to make sure that he
2 testifies before Mr. Halderman so I don't end up having a
3 misconnect here.

4 MR. CROSS: The pace at which we're going, it may be
5 that Dr. Halderman is tomorrow.

6 THE COURT: All right. I do want to warn you that
7 I'm going to keep on running. I'm going to run late. I'm not
8 going to stop at 5:00.

9 MR. CROSS: Thank you, Your Honor.

10 COURTROOM DEPUTY CLERK: Please raise your right
11 hand.

12 (Witness sworn)

13 COURTROOM DEPUTY CLERK: Please have a seat. Loudly
14 and clearly state your name, and spell your last name for the
15 record.

16 THE WITNESS: Amber McReynolds, and it is
17 M-C-R-E-Y-N-O-L-D-S.

18 Whereupon,

19 AMBER MCREYNOLDS,

20 after having been first duly sworn, testified as follows:

21 DIRECT EXAMINATION

22 BY MR. BROWN:

23 Q. Ms. McReynolds, good afternoon. My name is Bruce Brown,
24 and I represent the Coalition plaintiffs in this case.

25 What is your current title and position?

1 **A.** Currently, I'm the executive director of the National Vote
2 at Home Institute.

3 **Q.** Where do you live and work?

4 **A.** I live in Denver, Colorado. The National Vote at Home
5 Institute is a national organization, but I live and operate
6 from there and travel around the country.

7 **Q.** And you have submitted declarations in this case; is that
8 correct?

9 **A.** Yes. Last year and this year.

10 **Q.** I want to review your background and experience briefly.
11 But since you've set most of this out in your declarations,
12 I'll skip over many of them.

13 THE COURT: I'm happy to reference anything you tell
14 me as to this individual.

15 MR. BROWN: Thank you, Your Honor. Document 277,
16 Page 93, lists her qualifications and her background, which
17 includes master's at London School of Economics, honors for her
18 work in Colorado, her participation in the MIT election and
19 data science lab, and other things that qualify her.

20 **Q.** **(BY MR. BROWN)** Has Denver received awards for elections
21 covering the work that you have done in Colorado?

22 **A.** Yeah. Formerly, I was the director of elections for the
23 city and county of Denver. So I administered elections in
24 Denver, Colorado, for over 13 years, serving as director for
25 seven years.

1 And in that time, we went from an organization that,
2 frankly, wasn't so good at running elections to one that is now
3 nationally and internationally recognized as one of the best
4 election offices in the country.

5 **Q.** Do you have experience in transitioning an election system
6 from a primarily DRE system to a primarily hand-marked paper
7 ballot system?

8 **A.** Yes. That was one of the first large transitions that I
9 oversaw during my time in Denver.

10 **Q.** And when was that?

11 **A.** So that was back from basically the period of 2005 to
12 2007. In that time period, we also transitioned from a legacy
13 county-based voter registration system to a statewide voter
14 registration system in Colorado.

15 **Q.** And was the brand of the DRE that was involved in Colorado
16 the same as the brand that is involved here?

17 **A.** No.

18 **Q.** From your perspective as an elections administrator and
19 the work that you do, are the same issues in terms of
20 feasibility presented in Georgia with respect to the Diebold
21 DREs as you faced in Colorado?

22 **A.** Yeah. And I should clarify. The Diebold -- the similar
23 system that is in Georgia was used in other counties. In
24 Denver we had a Sequoia system. So the vendors were different
25 than what is in Georgia.

1 But the feasibility in terms of the hardware equipment
2 systems and sort of transitioning to a new system are similar
3 complexities to what exists anywhere really in the country.

4 **Q.** And do you have a background in conducting or setting up
5 processes for audits?

6 **A.** Yes. So Colorado was a random audit state up until 2017.
7 And the law election reform package of reforms that we passed
8 in the legislature in 2013 included risk-limiting audits
9 statewide.

10 So once we addressed -- and this, again, is a sequencing
11 thing. But usually you have to address the policy flaws within
12 your legal structure for elections, then design voter-centered
13 processes, and then design effective technology.

14 So Colorado is where they are today because we sequenced
15 those reforms over a long period of time culminating with
16 implementation of a statewide risk-limiting audit, which is now
17 basically the gold standard, maybe even platinum standard, if
18 you will, with regards to election auditing.

19 **Q.** Have you had experience dealing with electronic pollbooks
20 in Colorado?

21 **A.** Yes. Denver actually utilized an e-pollbook provided by a
22 vendor in 2006, which created significant technical failures.
23 And as a result of that, we made a determination to not use an
24 outside vendor for that product in the future. And instead we
25 went back to paper pollbooks for a period of time. Then once

1 the statewide voter registration system was designed and built,
2 now Colorado actually uses a voter check-in process that is
3 connected -- it is like a front end to the statewide voter
4 registration system. So we don't have a need to use an outside
5 vendor for any pollbook.

6 And I usually advise jurisdictions and states wherever I
7 go to that there is not a necessary -- you don't really need to
8 have a vendor provide an e-pollbook solution if you have your
9 statewide database designed correctly.

10 MR. BROWN: Your Honor, I would tender Ms. McReynolds
11 as an expert in the area of elections to testify on the
12 feasibility of Georgia transitioning from DREs to hand-marked
13 paper ballots, on audits of hand-marked paper ballots, and on
14 electronic pollbooks.

15 MR. BELINFANTE: Your Honor, we would object to that
16 designation. She has not testified thus far that she has any
17 knowledge of Georgia law, of Georgia elections, of Georgia
18 counties or the cities, et cetera. I can get into more of it.
19 Or if the Court would like, I can ask some questions on voir
20 dire.

21 THE COURT: You can go ahead and ask on voir dire.

22 VOIR DIRE EXAMINATION

23 BY MR. BELINFANTE:

24 Q. Ms. McReynolds, my name is Josh Belinfante. I represent
25 the state. Good afternoon to you.

1 **A.** Hi.

2 **Q.** Your experience in elections in terms of serving as an
3 administrator is limited to Colorado; isn't that correct?

4 **A.** That is correct.

5 **Q.** And in preparation for your testimony today -- or let me
6 back up a second.

7 You do not have a law degree; is that right?

8 **A.** Correct.

9 **Q.** And in preparation for your testimony today or in
10 preparation for your declarations, did you review any county's
11 budget in the State of Georgia?

12 **A.** County budget, no.

13 **Q.** Did you review any city's budget in the State of Georgia?

14 **A.** No.

15 **Q.** Did you review any Georgia laws regarding elections in the
16 State of Georgia?

17 **A.** Yes.

18 **Q.** And who provided you with those laws?

19 **A.** So I reviewed some of Georgia's laws actually in this past
20 legislative cycle when I flew down to Atlanta and worked with
21 some lobbyists that we had hired from my organization to make
22 suggestions regarding the election omnibus bill. And I also
23 met with the Secretary of State staff while I was in town.

24 **Q.** And that was House Bill 316, the omnibus bill?

25 **A.** Yes.

1 Q. In terms of -- have you -- in terms of -- are you offering
2 any kind of methodology today to your opinion that it is
3 feasible to transition, or is it simply based on your
4 experience in -- your administrative experience as an election
5 official?

6 A. Can you restate that question?

7 Q. Sure. Is there any formula that you use to determine
8 feasibility, or is it just based on your general experience as
9 an election administrator?

10 A. It is based on my extensive experience as an election
11 administrator overseeing various transitions of not only voter
12 registration systems but also various voting models, methods,
13 and system changes.

14 Q. And, again, that is all limited to Colorado?

15 A. It is in Colorado and the largest jurisdiction in
16 Colorado.

17 MR. BELINFANTE: Your Honor, we would move that she
18 is not an expert under Rule 702. She is not -- has not proven
19 or established any level of knowledge about city or county
20 budgets, which certainly goes into a question of feasibility.
21 She has not indicated -- she is not trained as a lawyer.

22 She has not looked at -- while she may know about
23 House Bill 316, for the most part this election and for the
24 questions decided here are going to be under existing law,
25 which she has not looked at, does not have training under.

1 And as far as reliability, she has not offered any
2 kind of methodology to determine what constitutes feasibility.
3 And so we think that under both the competency aspect and the
4 reliability aspect she should not be a qualified expert for
5 purposes of offering an opinion on feasibility of Georgia
6 jurisdictions making transitions.

7 MR. BROWN: Your Honor, as you know, under Eleventh
8 Circuit law, experts may be qualified in various ways. While
9 scientific training or education may provide possible means to
10 qualify, experience in a field may offer another pass to expert
11 status. That is the *Frazier* case.

12 Ms. McReynolds --

13 THE COURT: All right. In order to facilitate and
14 expedite this matter, I think I can reserve the question of
15 whether I'm going -- she is testifying as an expert. An
16 individual also under the rules is allowed to testify based on
17 his or her experience. And I don't know what her opinions will
18 be.

19 And no matter what, it is going to be to some extent
20 limited based on her experience. If she starts opining about
21 Georgia law, that is something different. So, you know, I am
22 reserving ruling on whether it is an -- whether she's
23 testifying as an expert or not. But she still can basically
24 make a statement as to her experience and -- and if we get into
25 an area that ends up being expert in nature, I can always

1 strike it. You have properly preserved it.

2 MR. BELINFANTE: Judge, would you like me to continue
3 to object if we view that it is getting into expert, or do you
4 want us to --

5 THE COURT: You can basically at the conclusion note
6 all of the areas that you think are -- so we don't interrupt
7 the flow -- all the areas that you think are problematic.

8 MR. BELINFANTE: Thank you, Judge.

9 DIRECT EXAMINATION (Continued)

10 BY MR. BROWN:

11 **Q.** Ms. McReynolds, based on your experience in Denver, what
12 are the -- what is the value in terms of reliability and
13 election integrity of hand-marked paper ballots over DREs?

14 **A.** So in my experience -- and when I first got to Denver, it
15 was a primarily DRE-based system with a limited number of
16 voters choosing to vote by mail. And we -- and I'll go back
17 all the way to HAVA. You know --

18 THE COURT: H-A-V-A?

19 THE WITNESS: HAVA, the Help America Vote Act.

20 **A.** Right after Florida and the butterfly ballot situation,
21 Congress allocated a lot of money very quickly. And that money
22 went to basically produce voting systems that were not
23 auditable or don't have paper audit trails simply to basically
24 react to the butterfly ballot problem.

25 The problem with how all of that happened was the vendors

1 were basically forced to design technology and systems very
2 quickly that weren't based on the usability guidelines and
3 standards that should have been applied for ADA accessibility.
4 But also because they did it so quickly, there was no thought
5 put into voter-centric processes and making sure that the
6 transaction for the voter was going to work.

7 So in Denver we had some DREs that did not have a paper
8 audit trail. We needed to have a paper audit trail after HAVA.
9 And we made the determination that the hardware that was
10 available to us and that was on the market was not sufficient
11 to make a significant investment in it.

12 So we limited the purchase to basically comply with HAVA
13 and only have one or two machines at each polling location
14 until in the future better systems would be presented for
15 purchase. So we strategically made that decision.

16 We also analyzed what voters wanted. So we did surveying
17 of voters, all of that, and we saw that a lot of voters wanted
18 to get their ballot mailed to them at home. And so that is
19 when we made the determination to then offer basically paper or
20 plastic at the polling places. You could vote on a machine, or
21 you could get a paper ballot obviously supplementing early
22 voting with both of those options and then mail ballots that
23 are all paper.

24 **Q. (BY MR. BROWN)** Do you have experience in Denver, in
25 Colorado, with a jurisdiction that transitioned from DREs to

1 hand-marked paper ballots but used the existing legacy election
2 management software?

3 **A.** So that is what we did in Denver. We went away from that
4 primarily DRE full-faced ballot with no paper audit trail to
5 the small usage of the Edge machines. They are Sequoia Edge
6 machines with a paper audit trail. Then we offered basically
7 you could either use the machine or you could vote on a
8 hand-marked paper ballot. And the majority of voters chose
9 hand-marked paper ballots.

10 **Q.** If you have an election system that uses, say, an AccuVote
11 scanner or, I think, Samsung scanner -- one of those brands;
12 right? -- and uses hand-marked paper ballots, if you have
13 hand-marked paper ballots, does that mean you don't need to
14 worry about security?

15 **A.** No, not at all.

16 **Q.** What do you do to address that?

17 **A.** So in any -- in any voting system, whether it is paper
18 ballots or it is a ballot-marking device with a paper ballot
19 produced audits, audits matter. Audits are there to confirm
20 that the equipment was operating the way it should, whether it
21 is a DRE or a central count scanner or precinct scanner.

22 But the goal of the audit is to make sure that the
23 equipment and the systems are acting as they did when you first
24 tested them to begin with and throughout. Then at the end of
25 the election, validating the result and that voters can trust

1 the result and that all those watching the election and
2 candidates involved can trust the outcome and the result.

3 The audit post election matters, whether it is a mail
4 ballot that is a hand-marked paper ballot, it is an early
5 voters ballot, a polling place, or election day ballot. Any
6 ballot that is involved in the election must and should be
7 audited to be a part of that confirmation that the election
8 outcome can be trusted.

9 **Q.** In terms of the feasibility of a transition from the DREs
10 to hand-marked paper ballots, is it easier if the jurisdiction
11 is already using paper ballots, say, for absentee ballots and
12 provisional ballots?

13 **A.** Certainly. So when I first arrived in Denver, we
14 basically had three different elections happening
15 simultaneously. So we had our mail ballots and sort of that
16 process. We had early voting that was paper ballot or DRE.
17 Then we had polling places paper ballot or DRE.

18 And there is a lot of logistical and operational
19 considerations with running all of those different types of
20 elections. So as we transitioned, we wanted to continue to
21 offer voters the option of a hand-marked paper ballot, whether
22 they were in person early voting or in person election day, as
23 well as the opportunity to vote on an electronic device with
24 accessible features if they wanted to do that.

25 So our whole goal was to provide choice to voters. But

1 what I would say is when you are already doing mail ballots and
2 you are already having to process and centrally count those,
3 which is exactly what we experienced in Denver, and then you
4 continue to see more and more voters requesting those, the
5 transition to paper ballots becomes much easier, frankly,
6 because we looked at that and said, well, we're already
7 processing more than a third of our voters in this way in a
8 central count environment. It isn't that much more to add
9 basically the paper coming from all of the polling locations
10 and the vote centers to that central environment, process all
11 of the ballots, and tabulate them that way. And by the way, it
12 also reduces and mitigates risk associated with counting and
13 tabulation equipment being scattered about at all the polling
14 places.

15 **Q.** In terms of where the scanning takes place, some
16 jurisdictions prefer precinct scanning and your preference, I
17 take it, is central scanning; is that right?

18 **A.** Yeah. And before we transitioned to the system that is
19 now in use statewide in Colorado, there were some jurisdictions
20 that used precinct scanners. But most used central count
21 environment.

22 And primarily that was because there was significant
23 efficiencies. We were already doing a process for mail
24 ballots. And so it made a lot more sense to do that. And then
25 from a security perspective, in Colorado, there are 64 counting

1 locations in state right now. And every one of those counting
2 locations has 24 by 7 surveillance cameras on all of that
3 tabulation and how that works over a significant period of time
4 before the election, once the database is programmed, and then
5 a significant period of time after once the election is
6 actually certified. So we don't have now risk at all of the
7 polling places and precincts. We don't have, you know, ballots
8 or tabulation equipment or any of that sitting out in the
9 field. And that also has enabled us to save a significant
10 amount of money on capital equipment purchases.

11 **Q.** The numbers radically decreased the number of scanners?

12 **A.** Radically.

13 THE COURT: The scanners are in the county office or
14 in the state -- Secretary of State's office for the scanning
15 and tabulation?

16 THE WITNESS: The scanners are in each county. So
17 every county main office has all of the tabulation scanners and
18 equipment. And the system -- also we don't use polling places
19 any more. We use vote centers.

20 And this system when we went to a new -- to purchase
21 a new voting system, it cost us about a tenth of what it would
22 have if we would have had to outfit all of the polling places
23 that existed. So this centralized environment not only
24 mitigates risk, but it saves quite a bit of money on extra
25 equipment.

1 **Q.** (BY MR. BROWN) The relief that the Coalition plaintiffs
2 are seeking in this case, just so you know -- and I'll
3 stipulate to this -- gives the -- does not require a county to
4 have central count but would allow central count or
5 precinct-based scanning.

6 Do you understand that?

7 **A.** Yeah. There's advantages and disadvantages to both
8 certainly.

9 **Q.** One is cost obviously?

10 **A.** Yes.

11 **Q.** Another is control -- central control, if you have it at
12 the county?

13 THE COURT: Don't testify.

14 MR. BROWN: Sorry. Thank you, Your Honor.

15 **Q.** (BY MR. BROWN) I want to shift gears a little bit quickly
16 to e-pollbooks. And describe to the Court the importance from
17 your perspective of maintaining accurate information for the
18 e-pollbooks to the election process.

19 MR. BELINFANTE: Objection, Your Honor. The witness
20 in the notice of her testimony, which is in the docket at 505,
21 has indicated she's going to be an expert or testify about the
22 feasibility of the proposed solution.

23 Getting into technical aspects of e-polling while
24 perhaps in her declaration is not one of the things that she's
25 identified as going to be talking about. It is more as it says

1 expert on feasibility of proposed solution.

2 MR. BROWN: Your Honor, I don't think the defendants
3 even gave a description of their witnesses' testimony at all.
4 We described it very briefly. It was in a little table. So
5 you fit it into the table.

6 THE COURT: Well, I'll allow it on a limited basis.
7 I can always not consider it. But I'm not sure if that is --
8 are you saying that this is something she has an experience
9 with or an expertise in?

10 MR. BROWN: She has -- she has both, Your Honor.

11 THE COURT: Why don't you try to focus on her
12 experience because it is just easier.

13 MR. BROWN: Sure.

14 **Q. (BY MR. BROWN)** Based upon your experience, are there
15 situations in which a problem with e-pollbooks can be just as
16 bad as a problem with the DREs in terms of getting voters into
17 voting places and getting them out and having them vote
18 correctly?

19 **A.** In my experience, it can be much worse.

20 **Q.** And why is that?

21 **A.** So if you are solely reliant on a check-in process that
22 relies solely on an e-pollbook without a paper backup system or
23 some other way to process voters or if you have any sort of
24 data integrity issues or connectivity issues or any of that in
25 any e-pollbook, you can't check voters in.

1 So you could have all the DREs or all the paper ballots in
2 the world ready to go for voters. But if you can't process
3 voters into the check-in process, you are going to have five-
4 and six-hour lines.

5 Similarly, if you have issues with the DRE stations or if
6 the ballot is long and it takes -- sometimes a voter that might
7 be using the sip and puff or the audio on a DRE, they may take
8 more than an hour to vote a ballot. And those kind of things
9 are difficult to plan for logistically because you don't often
10 know what a voter may be utilizing there.

11 So in my experience, e-pollbook issues can be much worse
12 than issues on a DRE.

13 **Q.** How does having a paper backup at the polling location
14 help that problem?

15 **A.** So if you do have a paper backup -- and this is something
16 that we instituted when we went to vote centers. We had a full
17 paper backup of the entire voter database at each vote center
18 location in Denver. And so if the pollbook is experiencing
19 problems or slowness or any of that, the election judges are
20 instructed to pull out those paper pollbooks. And then they
21 can at least continue to process voters knowing what correct
22 ballot style to give them.

23 Any voters that could access same-day registration or
24 don't match what is in the pollbook would be diverted to a
25 provisional. But it enables that check-in process to continue

1 to flow should there be a technical issue.

2 **Q.** Thank you. I want to shift gears a little bit.

3 Do you have experience in Colorado dealing with different
4 kinds of federal or state certification of new election systems
5 or equipment?

6 **A.** Yes.

7 **Q.** If new equipment has to obtain both state and federal
8 certification, how long of a process is that typically and what
9 does that involve?

10 MR. BELINFANTE: Objection. Relevance. She's
11 testifying about how long it takes in Colorado, which has
12 nothing to do with Georgia or why we are here.

13 **Q. (BY MR. BROWN)** Let me ask you this question. Assume that
14 Georgia requires federal certification of its election
15 equipment. Just assume that. I'm not asking you to testify to
16 that. Assume that it also requires some kind of state
17 certification.

18 Based upon your experience both in Colorado and your work
19 around the country, what is involved in getting election
20 equipment certified and how long does it take?

21 MR. BELINFANTE: Same objection, Your Honor.

22 THE COURT: Why don't you just, first of all, say how
23 long did it take you in Colorado. Did you work with that
24 issue?

25 THE WITNESS: Yeah. We were the recipient I guess I

1 would say of some of this. It depends. I mean, federal
2 certification is federal certification. If something is
3 already federally certified, there is no additional time that
4 it takes.

5 State depends on who is doing the certification, what
6 the timeline looks like, the responsiveness of the vendor. So
7 I mean in a short window, it could be 30 days. It could take
8 90 because of the responsiveness back and forth.

9 So it really just kind of depends on what that looks
10 like. And in my experience, that time variable has varied
11 significantly depending on the vendor, what is in place, and
12 the, you know, sort of back and forth and how specific the
13 state was with their direction on certification.

14 **Q. (BY MR. BROWN)** Do you have experience in large scale
15 installations of new election systems in Colorado?

16 **A.** Yes.

17 **Q.** And what is the biggest that you have been involved in in
18 Colorado?

19 **A.** So the biggest for me was both the implementation at
20 Denver with the paper ballots and new central count
21 environment. And then when we went to a new voting system in
22 2015, we were actually the first county to pilot. And Denver
23 actually worked with a vendor to design most of the elements of
24 the system that are now in place statewide. But we implemented
25 that as the first county and rolled that out in the 2015

1 municipal cycle.

2 **Q.** Well, how long did that take from post to post?

3 **A.** So Colorado overall in terms of moving to a new voting
4 system post the policy reforms that we experienced in 2013
5 started in the very beginning of -- middle of 2014 with what
6 was called a Uniform Voting System Committee. So it was a
7 statewide committee that the Secretary of State started to have
8 conversations with all different stakeholders about what would
9 be included in a voting system.

10 There were all kinds of considerations. In fact, I think
11 there was even a presentation from Kennesaw State about how
12 Georgia was doing their process. And the decision for the UVS
13 Committee in Colorado at that time decided that that wouldn't
14 be something that would work in Colorado. We went away from
15 that.

16 But that group sort of started deliberations in a public
17 way about what a voting system would look like. Simultaneous
18 to that group, Denver started conversations with the vendor
19 that would ultimately be piloted in Denver and piloted
20 elsewhere about designing a system that effectively supported
21 the new process and policies that we put in place.

22 For instance, I told the vendor at the time we're not
23 going to buy any proprietary hardware. We want commercial
24 off-the-shelf hardware with software that supports it. We will
25 not be buying any more proprietary hardware, mainly because it

1 is ten times as much as the cost of commercial off-the-shelf
2 products and, frankly, less accessible.

3 So we started designing what that would look like. That
4 system was piloted in May of 2015. So conversations and
5 committees started in the end of -- or beginning of 2014 at
6 some point. Pilot in Denver in 2015. Pilot in other counties
7 as well as three other vendor systems in November of 2015. And
8 then after that, there was a phased approach of segments of the
9 state in terms of counties leading up to the primary election
10 in 2016.

11 **Q.** Thank you. Based upon your experience at Vote at Home and
12 in Colorado, are you aware of a new system installation that is
13 larger or more complex than the one that Georgia is
14 undertaking?

15 **A.** No.

16 **Q.** Thank you.

17 Very quick question on early voting. When you have
18 hand-marked paper ballots in Denver and you also have early
19 voting, how did you when you were overseeing elections get
20 enough ballots to each polling location, given that they are
21 going to be at more than one precinct?

22 **A.** So there's really two different options in terms of
23 managing paper ballot inventory at early voting locations. We
24 chose -- in the first few cycles of doing this, we chose
25 preprinted ballot stock. So we had giant security cabinets

1 created that had locks and seals on them.

2 But we basically had 450 different slots, if you will. It
3 kind of looked like giant, you know, paper processing plants.
4 But they were all cabinets that were secured. And we would
5 take those out to each early voting site. We had ballot stock
6 where we basically had a formula where we would stock more
7 styles that were in and around the vicinity of that particular
8 location.

9 We used GIS techniques and other predicative tools to
10 determine the inventory that we would need. And then because
11 we were processing voters in that statewide voter check-in
12 process, we knew where the inventory was coming down realtime.
13 And then we would literally send out proactively if we needed
14 to ballot stock to replenish in the middle of each day or at
15 the end of each day. But we had a constant view of what that
16 looked like.

17 So actually operationally when you do something like that
18 it doesn't take that much to do. And I will say that in 2008
19 Denver actually voted more people early voting than LA County
20 did at that time. So we had -- we had over 50,000 people go
21 through early voting in Denver in 2008 primarily on a paper
22 ballot.

23 The other method is ballot-on-demand printers. And that
24 is more widely used now across Colorado with a paper backup
25 stock available. But ballot on demand essentially allows you

1 to not carry that kind of inventory and instead print on demand
2 as voters come in.

3 **Q.** And in Denver, how many different ballot styles did you
4 use for the 2008 election?

5 **A.** It was 426. I think I have that number right. It has
6 been 11 years. I think that is right.

7 MR. BROWN: That's all my questions. Thank you,
8 Ms. McReynolds.

9 CROSS-EXAMINATION

10 BY MR. BELINFANTE:

11 **Q.** Ms. McReynolds, do you know when the first elections in
12 Georgia will be after this hearing?

13 **A.** I think you have some in November 2019.

14 **Q.** Okay. Are you aware that we also have some elections
15 occurring in September of this year?

16 **A.** I think I read that somewhere, yes.

17 **Q.** And are you familiar with Georgia law regarding -- let me
18 back up.

19 Are you familiar with Georgia early voting?

20 **A.** Yes. I have looked at a couple of the statutes related to
21 that.

22 **Q.** And do you know when for the September elections early
23 voting commences?

24 **A.** I believe it is two weeks -- two and a half -- slightly
25 over two weeks. I might have that wrong. So I'm sorry.

1 **Q.** Are you aware that the Coalition plaintiffs have said that
2 paper ballots should be applied in any election in Georgia
3 occurring after October 1 of this year?

4 **A.** Yes. I read that in the -- I think one of the filings.

5 **Q.** And you think that -- or you have testified that you
6 believe Georgia municipalities and counties could move to an
7 all paper ballot by those October -- by the elections occurring
8 after October 1?

9 **A.** I have testified that they are already using paper ballots
10 with mail ballots. So every jurisdiction in Georgia is already
11 processing paper ballots. So expansion of that similar to what
12 we did in Colorado is not a massive process change because it
13 is already occurring.

14 **Q.** Okay. So that is a yes?

15 **A.** Yes.

16 **Q.** Okay. And do you have an opinion regarding whether all
17 those cities and counties that may have elections in September
18 could also be done on paper ballot?

19 **A.** Depending on the outcome of the decision of the Court,
20 yes, I think it could be. But it definitely depends on
21 timelines.

22 **Q.** So it would depend on when the Court issues -- at what
23 point would you say it is too late to ask a city or county to
24 conduct an election on paper ballot?

25 **A.** I think it would depend very much on contracts that are in

1 place in terms of printing, some of those details, which I do
2 not have answers to.

3 **Q.** Okay. And in terms of feasibility, you would agree with
4 me that several factors go into determining if a city or county
5 government -- if it would be feasible to do that, including
6 things like budget constraints; is that correct?

7 **A.** Yeah, that could be a factor.

8 **Q.** Okay. And time?

9 **A.** Time would be a factor as well.

10 **Q.** And I believe you testified earlier about in Colorado you
11 had to get the, quote, legal flaws fixed first. That would
12 also apply to Georgia elections at least in theory; correct?

13 **A.** When I said -- when I testified about the changes we made
14 in Colorado, that was more about the voting experience. We
15 were already using paper ballots prior to changing our policies
16 in 2013.

17 **Q.** Would you agree with me that voting -- that the procedures
18 for replacing voting systems vary by state?

19 **A.** Yes.

20 **Q.** And Colorado has 3.8 million registered voters; is that
21 right?

22 **A.** Yes.

23 **Q.** And I believe you testified there are 64 counties in
24 Colorado?

25 **A.** Yes.

1 Q. Do you know how many counties are in Georgia?

2 A. 159, 69. Something like that.

3 Q. 59.

4 A. 59. I had it right the first time.

5 Q. The -- and you testified in your declaration though that a
6 key difference between Denver's current system of voting and
7 what the Coalition plaintiffs proposed is a very high component
8 of mail balloting in Denver.

9 Do you recall that?

10 A. Yes.

11 Q. Isn't it about 95 percent of the mail -- or the ballots
12 that come in in Denver are done by mail?

13 A. So we mail a ballot to everyone in Colorado before every
14 election. In Denver, about 95 percent of people use that
15 ballot that was mailed to them. And the remaining five percent
16 show up in person and either vote on a hand-marked paper ballot
17 or on a ballot marking device.

18 Q. Do you have any idea of what the rate of mail-in balloting
19 is in Georgia?

20 A. Yes. I think it was just slightly over 20 percent in one
21 of the most recent elections that I saw.

22 Q. Is it true that you have given Georgia high marks for its
23 mail-in ballot system?

24 A. No. No. That is why I was down here in the spring.

25 Q. I'm sorry. Was it for the no excuse absentee?

1 **A.** Sort of.

2 **Q.** Sort of?

3 **A.** There is a lot of improvements that could be made, which I
4 have suggested in my affidavit.

5 **Q.** Okay. You would agree with me that Georgia could not at
6 least in the 2019 elections likely see the type of mail-in
7 ballots that you see in Colorado; is that right?

8 **A.** I don't agree with that. I think it could -- I think it
9 could go up quite significantly if there were a couple of
10 changes made.

11 **Q.** Okay. But not to 95 percent?

12 **A.** No.

13 **Q.** Now, you testified about -- let me ask this and back up a
14 second.

15 Denver, is it a county and city government? Is it a
16 consolidated government?

17 **A.** It is a city and county municipality.

18 **Q.** And there is one board of elections for the city and
19 county of Denver; is that right?

20 **A.** There is one elected clerk and recorder.

21 **Q.** And the process I believe you testified for Denver to
22 transition from DREs to handheld ballots took place from 2005
23 to 2007?

24 **A.** No. So it started -- it started right around 2005 and
25 kind of happened in incremental phases over a few year period.

1 Q. I see. How many precincts are in Denver? And when I say
2 Denver, I mean the city/county.

3 A. Right now or back then?

4 Q. In 2005 and then in 2007, if you know.

5 A. It was over 400 in both. I'm not sure of the exact number
6 but at least 426.

7 Q. And you also testified that when Denver or maybe it was
8 Colorado went from an e-pollbook to paper that took some time.
9 How much time did that take?

10 A. E-pollbook to paper, what do you mean?

11 Q. I believe you said you had some experience with the
12 e-pollbook and there were technical failures and there was a
13 transition where you went to just paper polling books; is that
14 right?

15 A. The failure of the e-pollbook occurred in 2006 in
16 November. Denver tried vote centers in lieu of polling places,
17 and there was a technical failure with the vendor in the
18 e-pollbook that was used. So Denver made the decision in the
19 transition to paper ballots to go back to polling places with
20 paper pollbooks for 2007 and 2008.

21 Q. Okay. So between the first election that you made that
22 transition -- or between the last election that was all
23 e-pollbook and the first election where you used paper, how
24 much time was involved there?

25 A. About a year by the time. Because in 2007 all three

1 elections that we ran that year were mail ballot elections that
2 just had a limited number of early voting sites available. So
3 we didn't have polling places in the year of 2007.

4 **Q.** And -- okay. At the time that Denver made its transition
5 from DRE-based voting to paper ballot voting, was Denver in any
6 way having a paper ballot form like Georgia does for absentee
7 ballots or provisional ballots?

8 **A.** Yes.

9 **Q.** And it still took two to three years to get it completely
10 transitioned?

11 **A.** No.

12 **Q.** I thought it took from 2005 to 2007. Is that not your
13 testimony?

14 **A.** No. My testimony was that we transitioned from the kind
15 of full DRE over that period of time and then bought some
16 accessible HAVA equipment in the time period. But the paper
17 ballots -- the mail ballots were always an option during that
18 time.

19 The full polling place with paper ballots and all of that
20 was completely rolled out for the 2008 presidential election.
21 From '6 to '8, there was no polling place elections in between.
22 It was all mail ballot elections for 2007.

23 **Q.** Bottom line, it wasn't done in a matter of weeks or
24 months; correct?

25 THE COURT: It -- I'm just trying to understand.

1 MR. BELINFANTE: I'm sorry.

2 THE COURT: What is it? Is it just simply being able
3 to produce a paper list of voters, or is it something else that
4 you're including in it?

5 MR. BELINFANTE: Good point.

6 **Q. (BY MR. BELINFANTE)** The transition for voters voting not
7 on a DRE, the removal of the DRE, that did not take place over
8 a period of weeks or months; is that correct?

9 **A.** Actually it did. Because in 2007, we ran our first
10 election that year in January, which was two months after the
11 November vote center election that was mostly -- it was all
12 DREs with mail ballots. And that 2007 January election was all
13 hand-marked paper ballots because we mailed a ballot to
14 everyone. And that is what they returned to us. So in less
15 than two months, we implemented that.

16 **Q.** And that was just in Denver?

17 **A.** Yeah. It was for a Denver election.

18 **Q.** And as a former administrator of Denver elections, are you
19 familiar with the budget of the election division in Denver at
20 least in 2017?

21 **A.** Yes.

22 **Q.** And was it about \$4.1 million?

23 **A.** Yes.

24 **Q.** Do you -- what was the population of Denver in roughly
25 2018? Do you know?

1 **A.** In 2018?

2 **Q.** Yes.

3 **A.** Just population I think Denver is right about 750,000.

4 **Q.** Okay. Are you familiar with Dekalb County in Georgia?

5 **A.** No.

6 **Q.** If I told you that Dekalb County was 756,000 people
7 roughly, do you have any reason to disagree with that?

8 **A.** No.

9 **Q.** If I told you that Dekalb County's budget in 2017 for
10 elections was 2.25 million, would you have any reason to
11 disagree with that?

12 **A.** No.

13 **Q.** Would you agree with me that the budget that a county has
14 in its election division can certainly impact how quickly it
15 can transition from a purely -- from a DRE and paper ballot
16 system to an exclusively paper ballot system?

17 **A.** Potentially. But it depends on what that elections office
18 is responsible for. In my experience in Denver, we have
19 greater -- we have more responsibilities than most election
20 offices because we manage campaign finance and various petition
21 processes and other things that most counties in other states
22 do not have.

23 So our budget is elevated also based on the number of
24 elections. So I would have to look at the number of elections
25 that county was conducting that year versus what Denver was

1 doing. Because the difference is more likely about those
2 factors, not about the voter count.

3 **Q.** But you have not looked at Georgia counties with regard to
4 the factors you just --

5 **A.** I don't know those factors for that particular county.

6 **Q.** Or for any county in Georgia; is that right?

7 **A.** That is correct. I haven't looked at any budgets this
8 year.

9 **Q.** In your original declaration at Paragraph 19, you were
10 talking about it is -- you state that it is imperative that the
11 correction of the DRE electronic pollbook and voter
12 registration records and the reconciliation of discrepancies
13 between the two records be undertaken immediately as a serious
14 effort. You continue and say, research and confirming accurate
15 information and correcting errors will likely take weeks of
16 work and must begin immediately, regardless of what voting
17 system is used in November's election.

18 Do you recall writing that?

19 **A.** Yes.

20 **Q.** Do you still believe that?

21 **A.** Yes. That was my affidavit in 2018.

22 MR. BELINFANTE: I have no further questions at this
23 time. Thank you.

24 CROSS-EXAMINATION

25 BY MS. BURWELL:

1 Q. Good afternoon.

2 A. Good afternoon.

3 Q. My name is Kaye Burwell. I only have a few questions for
4 you.

5 I saw in your declaration that you said that Denver's
6 voter population -- registered voter population is 500,000?

7 A. That is about right.

8 Q. How many scanners do you-all have?

9 A. Central count scanners or what do you mean by scanners?

10 Q. Scanners -- optical scanning units.

11 A. So I think now in Denver there are 12 to 15 in the
12 counting facility.

13 Q. And is all of the counting done in that counting facility?

14 A. Yes.

15 Q. Do you know how many registered voters there are in Fulton
16 County?

17 A. I think it is around 700,000.

18 Q. Okay. How did you get that information?

19 A. Well, I toured Fulton County about nine or ten years ago
20 with my former boss. We toured the elections office in
21 Atlanta, and I feel like that was around the number that I
22 had -- that I had been told at that time.

23 Q. That was ten years ago?

24 A. Around. Maybe a little less. But around that.

25 Q. Okay. And do you know how many optical scanners Fulton

1 County has?

2 **A.** No.

3 **Q.** And would you agree with me that the number of scanners
4 necessary would depend on the number of voters?

5 **A.** Yes. And it depends on the nature and the type of ballot
6 counting occurring and where it is and all of that. Yeah.
7 Precinct scanners versus central count is very different.

8 **Q.** So you are saying that you can either -- you can either
9 count in one place or you can count in multiple places;
10 correct?

11 **A.** Or a combination of both, yeah.

12 **Q.** So the number of scanners you would need would depend on
13 which of those methods you used, either central counting,
14 counting elsewhere, or both; correct?

15 **A.** Right. And precinct -- if you are counting in the
16 precinct, you need a lot more equipment. A significant amount
17 of equipment.

18 **Q.** Do you have any indication of how many scanners -- I know
19 in your declaration you had said you believed that there were
20 900 scanners available in the State of Georgia.

21 **A.** Yes.

22 **Q.** Where did you get that information from?

23 **A.** I saw that in one of the -- I think a news article. And
24 then I also saw it in the filing that the Coalition filed in
25 their brief.

1 Q. Okay. So your -- the information you have provided isn't
2 personal information to you? It is information you gleaned
3 from the plaintiffs?

4 A. Different news -- and a few news articles I think that I
5 had seen at the time.

6 Q. Okay. So did you ever talk to the journalist that
7 authored the news article to determine where they got their
8 information from?

9 A. No. No, I did not.

10 Q. Now, one of the things you said in your declaration was
11 that counties could use ballot-on-demand printers?

12 A. Yes.

13 Q. Correct? Do you know if there are any counties that
14 actually have ballot-on-demand printers?

15 A. I believe that I heard at a conference at some point a
16 representative from Georgia talking about ballot-on-demand
17 printing being utilized here in the State of Georgia.

18 Q. But you don't know whether ballot-on-demand printing is
19 available in every county in the state; correct?

20 A. I do not know if every county has that capability. And I
21 don't know if the vendor has offered that as a potential
22 solution.

23 Q. And if someone was going to use ballot-on-demand printers
24 and didn't have them, they would need to source those; correct?

25 A. Yeah. And they would -- there are many options for that

1 type of technology. It doesn't require a voting system vendor
2 to provide that.

3 **Q.** In Colorado, it doesn't provide a voting system vendor?
4 Is that what you are saying?

5 **A.** In most of the states that have this, the ballot-on-demand
6 printers are often different from the voting system provider.
7 So there are ballot -- there is ballot-on-demand printing
8 software and equipment that is not voting system vendor driven.

9 **Q.** Are you familiar with the State of Georgia's requirements?

10 **A.** On ballot-on-demand printing?

11 **Q.** Correct.

12 **A.** Not the current -- not the current, if there are any. I'm
13 not aware of any current procedures on it.

14 **Q.** And I think you already answered this. But with respect
15 to the sourcing of scanners, you're not familiar with the
16 requirements of the Secretary of State with respect to
17 certification of scanners prior to being used?

18 **A.** I am -- I understand that Georgia requires federal
19 certification and also state certification.

20 **Q.** And are you familiar with the Secretary of State's process
21 for procuring election equipment, such as scanners?

22 **A.** I understand it to be an RFP process followed by selection
23 of a vendor followed by certification.

24 **Q.** But you have not been involved in any of those things?

25 **A.** No.

1 Q. It is just your understanding?

2 A. I have not been an election official or involved in
3 procuring a system in Georgia.

4 Q. And do you have any familiarity with the Secretary of
5 State's process for deploying election equipment after it has
6 been sourced?

7 A. No, not at this -- not at the current.

8 THE COURT: Let me just say in the interest of time
9 and in the defendants' time as well, I think that the witness
10 has been very forthright about the scope of her experience and
11 has been useful for both parties. But I'm not sure it is -- I
12 mean, she's not really extending herself as an expert about the
13 Georgia procurement process. So that's sort of clear. I don't
14 know that it is -- I don't think the Court has to be educated
15 about that.

16 MS. BURWELL: Well, I was asking because it goes to
17 the issue of whether or not it can be done within a certain
18 period of time.

19 THE COURT: But if she doesn't have any express
20 knowledge beyond a generalized knowledge of the Georgia
21 procurement process, I don't think -- to the extent she has
22 expertise, that is not being extended as her expertise. She is
23 basically saying these things are feasible. You are all going
24 to have to have other evidence about -- and they will -- about
25 the process.

1 But I'm not sure it is useful given the limited
2 amount of time since she hasn't again conveyed that her
3 expertise is in the procurement process or on the Georgia
4 regulations. I don't know that -- I wouldn't in any way
5 consider her an expert on that, much less being able to testify
6 based on her experience as to a process that is identical to
7 Georgia.

8 Her experience is useful. But it has its limits
9 relative to Georgia. That is clear. So you can go on. You
10 can use your time as you see fit. But keep on going. But I'm
11 just telling you -- I'm just sort of -- in all my comments here
12 again, I'm going to say I must have talked a minute. I'll take
13 away -- I will deduct it from your time. But that is your
14 business.

15 MS. BURWELL: Yes, Your Honor. Just so the Court
16 knows, my point was the fact that she doesn't have that
17 experience goes to her opinion with respect to how much time it
18 would take to implement a system. And so that was the only
19 point I was making.

20 THE COURT: You go on as you see fit.

21 MS. BURWELL: That was the only point I was making.

22 **Q.** **(BY MS. BURWELL)** You had also in your declaration talked
23 about ballot printing and ballot printing companies that you
24 had contacted?

25 **A.** Yes.

1 Q. And you didn't identify any of those companies. But what
2 size ballot did you discuss with these companies that you
3 contacted?

4 A. So the range was 15 inches up to 19 inches two-sided.
5 Again, all of that varies by, you know, the style of the
6 election, all that. And I've worked with various vendors over
7 time.

8 And given my extensive experience not only with mail
9 ballot elections but paper ballot elections, cost and things
10 like that are pretty easy for me to determine given the number
11 of RFPs I have been through.

12 So I reached out to one of the most recent vendors that
13 Denver has used to determine what an average cost would be for
14 the ballot.

15 Q. So that was the cost that would be the average cost for a
16 ballot in Denver?

17 A. No. It was the same quote that they give to multiple
18 different jurisdictions around the country because that is what
19 I asked them for, a flat paper ballot.

20 Q. Okay. So you just asked them for a flat paper ballot 15
21 to 19 inches two-sided?

22 A. Yes.

23 Q. Correct?

24 A. Yes.

25 Q. And that was the price that they gave you?

1 **A.** That is the estimated price, yes. And that vendor prints
2 more paper ballots than any other vendor in the country.

3 **Q.** So it was only one vendor that you contacted?

4 **A.** The one that I mentioned in the affidavit -- I contacted
5 others. But the one that I mentioned in the affidavit was in
6 between cost from some of the others. So some of them were
7 more, and a few of them were less. But that vendor has the
8 capability to print and does print for the largest jurisdiction
9 in the country.

10 So given that this is a statewide rollout here in Georgia,
11 I wanted to understand from a volume perspective what the cost
12 would be for a ballot.

13 **Q.** Okay. So that was sort of -- that was an approximation?
14 You said some gave you a higher cost and some gave you a lower
15 cost you said?

16 **A.** The cost that is in there is the average cost for that
17 range of a ballot. Some vendors that don't print as high
18 volume or have different processes or efficiencies within their
19 operations might charge more. There was a few vendors that
20 came in less than that. And I had not seen a cost under that.
21 So I put in there my best estimate based on the research and
22 review that I did.

23 **Q.** Okay. Let me ask you one last thing. You had mentioned
24 that you spoke to somebody in Adams County that gave Georgia
25 154 scanners?

1 **A.** Yes. So the clerk in Adams County, Colorado, they had --
2 they had the AccuVotes, the similar system that y'all have
3 here. And Adams County, Colorado, it was my understanding
4 based on that conversation had transferred the equipment that
5 they were no longer using to the State of Georgia.

6 **Q.** Do you know if those -- did you talk to anybody at the
7 State of Georgia to determine whether or not those scanners
8 were actually ever used in Georgia?

9 **A.** No.

10 **Q.** And so you don't know if they were ever certified in
11 Georgia for use in Georgia?

12 **A.** It was hardware. So the certification -- you already have
13 that equipment certified in the State of Georgia. It was the
14 hardware that was being sold by Adams County because they
15 bought a new voting system that was transferred. And I don't
16 know if they went through a vendor to do it. But it was my
17 understanding their equipment was transferred to Georgia ahead
18 of 2016.

19 **Q.** But you have no information on whether or not that
20 equipment was ever used in Georgia?

21 **A.** No. I didn't ask anybody if that had been used.

22 MS. BURWELL: Thank you.

23 THE COURT: What were the prices? I'm trying to find
24 your affidavit. What was the letter of the affidavit?

25 MS. BURWELL: Excuse me.

1 THE COURT: What was the letter? What was the
2 exhibit number or letter of the affidavit?

3 MS. BURWELL: Her affidavit is Document 277 starting
4 at Page 93.

5 THE COURT: Okay. It is not in this group. All
6 right. Thank you.

7 Do you remember what the mid level price was?

8 THE WITNESS: Twenty-six cents per ballot.

9 When you -- and this is something that we did when we
10 transitioned. But when you factor in the cost of, you know,
11 less equipment, less delivery, all of that, coupled with the
12 cost of the ballot printing, you actually see more of a savings
13 when you are not having to have as much equipment out in the
14 field and process all of that out in the field. So it varies.
15 But we saw a savings.

16 THE COURT: All right. Thank you.

17 MR. BROWN: I just have one follow-up question, Your
18 Honor.

19 REDIRECT EXAMINATION

20 BY MR. BROWN:

21 **Q.** You testified that you saw some savings. And just so the
22 record is clear, you saw some savings in the transition from
23 DREs to hand paper ballots? Is that what you meant?

24 **A.** Yes. So we no longer needed a warehouse. We had a
25 40,000-square-foot warehouse where we had DREs that went away.

1 That was a significant cost. Delivery costs for the large
2 machines was a significant reduction in savings.

3 So yeah, there were multiple costs down. And the other --
4 the other factor that we found was the expense of maintaining a
5 DRE system mainly because the traditional DREs might cost \$4000
6 apiece. And to replace a screen or any of the components could
7 be upwards of \$1000 each. So the newer technology with
8 off-the-shelf hardware is much less expensive than the
9 proprietary hardware that most states or most states purchased
10 after HAVA.

11 **Q.** As an election administrator in Colorado, would you be
12 concerned with the purchase of used AccuVote scanners?

13 **A.** So there is a whole process. I mean, the jurisdictions
14 around the country have done this over a long period of time.
15 To sort of prepare them and then recertify them, we have a
16 trusted build process that we call it in Colorado.

17 So that process of implementing is one thing. But there
18 have been many transfers of equipment around the country that
19 are certified federally and used elsewhere.

20 MR. BROWN: Thank you very much for your testimony
21 today.

22 THE COURT: May this witness be excused?

23 MR. BELINFANTE: Your Honor, could I have actually
24 one follow-up question given the budget question that was just
25 asked?

1 THE COURT: Yes.

2 RE-CROSS-EXAMINATION

3 BY MR. BELINFANTE:

4 Q. Ms. McReynolds, again, you testified that the 2017 budget
5 for the Denver elections division was about 4.1 million?

6 A. Yes.

7 Q. Are you aware that in 2018 6.1 million was appropriated to
8 the elections division?

9 A. Yes.

10 Q. And in 2019 the estimate is 7.8 million?

11 A. Yes.

12 Q. Why are those costs going up?

13 A. Because there are more elections in those years, and there
14 has been added services since the time that the 2007 election
15 was in place.

16 Q. How many -- I'm sorry.

17 A. More staff and expanded technology. All of that. So
18 there has been added services. If you look at the cost per
19 vote, that has gone down.

20 Q. And --

21 A. And the population in Denver has also gone up by
22 25 percent since 2007. A lot of people are moving from the
23 east to the west it seems.

24 Q. 25 percent from 2007 to 2017; right?

25 A. Yeah. About that. Yeah.

1 Q. But the budget numbers I gave you, just so we're clear,
2 were 2017, 2018, and 2019?

3 A. Right. But you asked me about 2007.

4 Q. No. I'm sorry. I was asking about -- that is what I
5 wanted to clear up. My questions were about '17, '18, and '19.

6 A. '17 was low because there was one election that year.

7 Q. And then in '18 it goes to 6.1 million; right?

8 A. Gubernatorial and two other elections, yes.

9 Q. Sure. And then in 2019 it goes up again from 6.1 to 7.8?

10 A. Three elections and added responsibilities for campaign
11 finance and technology.

12 Q. How many FTEs did you add for campaign finance and
13 technology? Do you know?

14 A. Add in 2019?

15 Q. Yes.

16 A. I left in 2018 in August.

17 Q. Do you know how many, if at all, were added?

18 A. I think they added two for campaign finance. And the
19 other aspect of 2019 was they had three citywide elections as
20 opposed to '18, which only had two citywide elections and one
21 special.

22 MR. BELINFANTE: Okay. Thank you.

23 THE COURT: May this witness be excused?

24 MR. BROWN: Yes, Your Honor. Thank you.

25 THE COURT: Thank you very much.

1 Is Mr. Barnes back?

2 MR. RUSSO: He is here.

3 THE COURT: So if he could come in. Thank you.

4 Thank you, Mr. Barnes. My apologies. I just want to
5 remind you that you are still under oath.

6 Whereupon,

7 MICHAEL LEON BARNES,

8 after having been previously duly sworn, testified as
9 follows:

10 REEXAMINATION

11 BY THE COURT:

12 **Q.** I was trying to digest your testimony at our break, and I
13 realized I wasn't sure of a few things, and that is why I
14 wanted to ask you back.

15 You were talking about the configuration of the ballot
16 process and the use of the contractors. And I wanted to just
17 make sure I got the sequence correctly and understood what the
18 scope of what you did and they did was.

19 You indicated, as I understood it, that they were part of
20 your team -- an important part of your team in doing the
21 software to develop the ballot for the county; is that right?

22 **A.** Yes, ma'am. They are involved in building the database.

23 **Q.** Building the database for the ballot. And does that
24 also -- is this routine? But does that also include a portion
25 that deals with state officers who might also be -- or nominees

1 for election?

2 **A.** The process at hand is whenever -- when an election
3 qualification closes and leading up to that time frame,
4 whenever we're given notification that an election is scheduled
5 in a jurisdiction, then that information is gathered through
6 the Secretary of State's office, shared with our office, and
7 then we share that information with our partners, our ballot
8 building team.

9 **Q.** All right. Those three contractors are your ballot
10 building team?

11 **A.** That is correct. Once they have the information in
12 relation to candidates, jurisdictions involved, races involved,
13 then they construct the initial database, the initial layout of
14 the data set. Once they have --

15 **Q.** Let's just say it is Fulton County. They do it for Fulton
16 County. And let's say it is also a year when there is a
17 President and a governor being -- running. Though I don't
18 think that usually happens at the same time. But -- all right.
19 So let's just say it is the governor and a number of other
20 statewide offices.

21 Would the member of the ballot team put those
22 individuals -- those offices up also in the ballot?

23 **A.** Yes.

24 **Q.** Okay. He or she is responsible for doing both the state
25 offices as well as the county offices?

1 **A.** All offices that are being contested in that jurisdiction.

2 **Q.** Okay. All right. And so they do that. And then he or
3 she member of the team sends it to you or brings over --

4 **A.** They physically deliver it to us.

5 **Q.** They physically deliver it in a disc or --

6 **A.** On a CD or on a locked encrypted USB drive.

7 **Q.** And then it goes to you personally?

8 **A.** It comes to me or a member of my staff.

9 **Q.** Okay. And then you referenced there might be some
10 correction at that juncture --

11 **A.** Uh-huh (affirmative).

12 **Q.** -- by one of you in the central office?

13 **A.** Uh-huh (affirmative).

14 **Q.** Is that by you or one of your staff members there?

15 **A.** It is by me or one of my staff members. We go through
16 basically almost a line-by-line review of the data set to make
17 sure that the right candidates are listed in the right order,
18 names are spelled properly, that the proper audio files are
19 attached to the proper names, that the races are in the proper
20 order.

21 If we find anything that is not as it should be based upon
22 State Election Board rules for ballot format, then we will
23 correct the database. We also inspect the database.

24 **Q.** So you will correct what they have given you either on
25 that thumb drive or on the --

1 **A.** We move the file from their thumb drive into our -- into
2 our file array. We keep it in our file folders.

3 **Q.** As soon as it comes in?

4 **A.** Yes. Yes, ma'am.

5 **Q.** So you are not any longer working with theirs?

6 **A.** That is correct. We basically take the data off of the
7 drive or the CD that they give us, and then we proceed from
8 that point.

9 **Q.** Okay. And then you do the correction?

10 **A.** Yes.

11 **Q.** Now, what do you do in terms of when it comes in in terms
12 of determining malware that might have been brought with it?

13 **A.** When -- again, when we get the CD or the drive, we first
14 load that drive onto our public environment, not to our private
15 environment. And my understanding of how my SOS IT operations
16 have set up our public computers is that when that drive is
17 inserted or if that CD is inserted, once the file is moved onto
18 that public device, it is scanned for known malware.

19 Then once we have it there, then we transition it to
20 another device, that USB drive that I talked about earlier that
21 I use for moving files back and forth from my public and
22 private device, the one that I format every time. Then that
23 drive is placed into the public, formatted --

24 **Q.** Slow down for me because that is how I ended up having to
25 have you come back.

1 You have got it in the public one, which is the Secretary
2 of State's office?

3 **A.** Yes, ma'am.

4 **Q.** And it has run whatever scans it is going to run. And
5 then it is put back on your -- on something for your -- you get
6 something else for your -- it may not be a thumb drive, I
7 realize. But something -- some type of drive that then you put
8 it back -- which you use to put it back on your private
9 computer?

10 **A.** Right. To transfer it from my public CPU to my private
11 air-gapped CPU.

12 **Q.** All right. And are other people on your team in the
13 Secretary of State's office doing that too, or is this just
14 you?

15 **A.** It is just me that moves the files from the vendor into
16 our system. We do that on purpose. It is just me.

17 **Q.** All right. And then you have it, and then does it go to
18 other members of your team at that juncture?

19 **A.** Once the file is in place on our -- basically our server
20 is holding the file. Once the file is placed into a review
21 folder on the server, then a member of my team -- we have a
22 check sheet that is itemized of what we're looking at that is
23 within a specific database within specific elections.

24 They will then download from the server a copy of that
25 file. And it is saved to their local private CPU. The local

1 private CPU is where the GEMS executable application or the
2 GEMS application is residing. The GEMS application is not
3 residing on the server. It is just -- the server is just
4 holding files. The GEMS application is on the individual's own
5 CPU.

6 They download a copy of that file onto their computer.
7 They open up the data file on their computer. And they begin
8 examining it to make sure that it has been built properly, that
9 all precincts are there, all district combinations -- that all
10 ballots are there, all voting locations. That everything has
11 been built properly.

12 **Q.** All right. So then if they make a correction because
13 somebody's name has been spelled incorrectly or for whatever
14 reason, they save it again on that. What happens then?

15 **A.** Right. They first -- after they have made the correction,
16 the corrected file is residing on their personal CPU. They
17 then create a backup copy of that file and save it back to the
18 server. That saving action back to the server replaces the
19 existing copy with the modified copy. So we only have one copy
20 of the database sitting on the server.

21 **Q.** Is that the public server, or is that on your --

22 **A.** That is the private.

23 **Q.** That is the private, your units?

24 **A.** Yes. Everything constructed with the GEMS is done through
25 the private environment.

1 Q. All right. So then what happens?

2 A. Then it moves from a review -- a review of the database
3 function. Then the file is moved from one folder to another
4 folder. That folder is for audio and visual inspection.

5 Once it is placed into that folder, we have a dedicated
6 room in our office where a member of my team will go in, again
7 copy that file from the server onto a private CPU in order to
8 create an election media, a memory card that is then placed
9 into a touchscreen device within that room. And then we look
10 at the ballot on a DRE to again validate that all the races are
11 appearing, all the candidates are in the proper order, that all
12 the audio files are in place, that we do not see any -- any
13 issues with the display of the ballot on the touchscreen.

14 Sometimes because of long questions or such, the screen
15 doesn't look correct in the way it lays things out. So that
16 would make us then make some subtle scaling adjustments in the
17 display of the database, which requires us to touch the
18 database again.

19 But once the audio and visual review is done, if there are
20 no corrections that need to be made to it, then the individual
21 that reviewed the data set will then go back to the server and
22 just move the file from one folder in the server to a different
23 folder.

24 Q. So what you create though, is that also the basis of
25 creating the card -- the memory cards?

1 **A.** I'm not sure --

2 **Q.** Well, we know that -- as a voter, from the consumer
3 experience, the voter experience, you are given a card, you
4 stick it in, and it knows basically what precincts you are
5 going to vote in and what you are going to get that is coming
6 up. We have some voter affidavits who say I got the wrong one
7 completely.

8 But I'm just trying to -- but it is what basically
9 populates the screen that we see as voters; is that right?

10 **A.** That is correct.

11 **Q.** So I guess what I'm saying is: When you do all of this is
12 the purpose -- the purpose is so that it will actually give the
13 precinct and the county the software needed at that polling
14 spot so that these cards can be stuck into -- I know that they
15 program them in advance. But it will pull it up once you go in
16 and try to vote?

17 **A.** Yes. It is making sure that if I select for base precinct
18 or combo 101 that if I make -- if I ask the system to pull up
19 that ballot that it pulls up the ballot that it should pull up
20 for that --

21 **Q.** And you are generating all those cards at some point?

22 **A.** We are generating a memory card in order to inspect the
23 DRE's ability to do such. We also can generate a voter access
24 card within our facility that will -- we can insert into the
25 touchscreen to validate that when you put that voter access

1 card in with a precinct designation and a ballot style that it
2 brings up that particular ballot for the voter to review.

3 **Q.** So when you have gone through all the perfection process,
4 then you send it to the -- when is it that you send it down to
5 the county to review?

6 **A.** After we have completed our audio and visual review, then
7 we generate the ballot proofs and the ballot database reports.
8 And those items are then shared with the county through the SOS
9 FTP location where they pull that information down to look at
10 the ballot -- in optical scan format the layout of the ballot.
11 The race -- the reports that we generate that we give to them
12 shows them what precincts are active, what voting locations are
13 active, so forth and so on.

14 When the county reviews that, at the conclusion of
15 reviewing that, they either send us back a list of corrections
16 that need to be made with signature or they send us back a
17 signed-off sheet with signature.

18 **Q.** All right. And if they have corrections and you have to
19 start -- you go back again?

20 **A.** That is correct.

21 **Q.** I know this seems very simple-minded, but I want to make
22 sure I understand. When you -- when you are through and you
23 are -- what are you providing to the county? It is now, you
24 know -- it is the beginning of early voting.

25 What are you providing to the county at that juncture?

1 **A.** What we provide the county is a single CD with a single
2 file on that CD. And that single file is their GEMS database.

3 **Q.** And what are they to use then for generating all the cards
4 for the precincts?

5 **A.** They take that CD that has -- contains their GEMS
6 database. And they insert it into their local GEMS computer
7 within the county jurisdiction. And then once they have loaded
8 the data file that is on the CD into their GEMS computer, they
9 can then create the various media they need to power their
10 touchscreen and optical scan units.

11 **Q.** So they are creating new cards for all that?

12 **A.** They are creating the official cards that will be used
13 within the jurisdiction.

14 **Q.** And when the poll worker goes in the morning and opens up
15 the system, what are they using?

16 **A.** What they are using -- the memory card has already been
17 inserted into the touchscreen and tested in pre-election
18 testing. And then what the poll worker simply does on election
19 morning is they verify the seals on the devices, that they have
20 the right units, and that they have remained sealed since the
21 conclusion of testing.

22 If those things are correct, then they break the seals.
23 They cut the seals. They open up the device. They have a key
24 that unlocks two side -- a side component and a front component
25 on the DRE. Behind one component is where the power button is.

1 Behind the other door is where the printer is.

2 They power the machine on. When the machine boots up, it
3 recognizes that the memory card is inserted. It begins loading
4 the election. It is reading the memory card to see that the
5 memory card is in election mode.

6 And then whenever a machine is at zero in election mode
7 when you turn it on, it automatically prints a zero report. So
8 that is what the poll worker does in order to enable the
9 touchscreen.

10 Once they have validated that the machine completes
11 printing the report and that the report is showing zero, they
12 roll that zero tape back up. They don't take it off. They
13 sign it, they roll it back up, leave it attached to the
14 printer. Then they close the printer compartment and lock it.
15 And they close the side panel with access to the power button
16 and lock that and then make sure the touchscreen is at the
17 proper angle, that the privacy shields are in place. And it is
18 ready to go.

19 **Q.** And the card remains in it?

20 **A.** Yes, ma'am.

21 **Q.** And then the card that we as voters put in is in a
22 different portal?

23 **A.** That is correct. That's correct.

24 THE COURT: All right. I know everyone has got it
25 down. But I just felt like I needed to make sure rather than

1 just zigzagging through it.

2 Are there any questions occasioned by mine without
3 making a point but just for clarity so that we don't go back in
4 four days and say I didn't understand something?

5 MR. RUSSO: I wanted to make one quick point or
6 question, Your Honor, to see if I could help clear things up.

7 REDIRECT EXAMINATION

8 BY MR. RUSSO:

9 **Q.** Is the voter access card -- what is the voter access card?

10 **A.** The voter access card is the yellow card that a poll
11 worker will hand to a voter once they have checked in within
12 the polling location.

13 **Q.** That is different from the memory card?

14 **A.** That is correct.

15 THE COURT: Mr. Brown, did you have one thing?

16 MR. BROWN: One clarification of a question that you
17 asked, Judge.

18 RECROSS-EXAMINATION (Further)

19 BY MR. BROWN:

20 **Q.** Mr. Barnes, did you say that when the contractor brings
21 the CD back to the Secretary of State's office, to your office,
22 the first time it is loaded it is loaded onto the public
23 server?

24 **A.** Correct.

25 **Q.** Okay. And are these contractors going to be involved in

1 preparing the database for the pilot program?

2 **A.** I don't -- I can't answer that question because I don't
3 know what vendor has been selected yet.

4 MR. BROWN: Okay. Thank you very much.

5 REEXAMINATION (Further)

6 BY THE COURT:

7 **Q.** One other question about the contractors. Are they
8 full-time contractors, or do they have other jobs as well? I
9 mean, I don't need to have a detailed thing. But are they --
10 is that a condition that they are full-time contractors?

11 **A.** My understanding of these three individuals is their sole
12 job with ES&S is to provide ballot building support for the
13 State of Georgia.

14 **Q.** Could they have contracts though with other entities?

15 **A.** I'm not aware of any others that they have. And I don't
16 know -- I don't know the answer to that question.

17 **Q.** They are not employees then though of ES --

18 **A.** I don't know if they are employees of ES&S or contractors
19 of ES&S.

20 THE COURT: All right. Okay. Thank you.

21 Again, my apologies for dragging you back. I hope it
22 was only from the Capitol.

23 MR. BROWN: I have, Your Honor, just one more
24 question.

25 THE COURT: One more. And that is it, unless it

1 blows the situation up.

2 RE CROSS-EXAMINATION (Further)

3 BY MR. BROWN:

4 **Q.** In rough order of magnitude, what percentage of the
5 ballots built by the Secretary of State's office are built by
6 the contractors?

7 **A.** For the May 2018 general primary, we as a state built 61
8 out of 159. For the July runoff, for the November general
9 election, they were built by the contractors.

10 THE COURT: Runoff or what about just the November
11 election?

12 THE WITNESS: The November election, I know for
13 certainty that they built everything for the November election.
14 I honestly don't remember if we built any for the runoff
15 election or not.

16 **Q. (BY MR. BROWN)** The contractors built all the ballots for
17 November?

18 **A.** That is correct.

19 MR. BROWN: Thank you.

20 THE COURT: All good? I thought we should be
21 operating from the same fact plane.

22 MR. POWERS: Good afternoon, Your Honor.

23 THE COURT: Good afternoon. Who is your next
24 witness?

25 MR. POWERS: Plaintiffs call Georgia State House

1 Representative and Gwinnett County voter Jasmine Clark.

2 COURTROOM DEPUTY CLERK: Please raise your right
3 hand.

4 **(Witness sworn)**

5 COURTROOM DEPUTY CLERK: Have a seat. Loudly and
6 clearly state your full name, and spell your last name for the
7 record.

8 THE WITNESS: My name is Jasmine Clark, C-L-A-R-K.
9 Whereupon,

10 JASMINE CLARK,

11 after having been first duly sworn, testified as follows:

12 DIRECT EXAMINATION

13 BY MR. POWERS:

14 **Q.** Good afternoon, Representative.

15 **A.** Good afternoon.

16 **Q.** What district do you currently represent in the Georgia
17 State House?

18 **A.** I represent House District 108.

19 **Q.** Before we discuss some of your work in the legislature, I
20 would like to turn to your personal experience voting in
21 Georgia elections.

22 Representative Clark, have you experienced any problems
23 trying to vote recently?

24 **A.** Yes, I have.

25 **Q.** And which election was that?

1 **A.** That was in the runoff to the primary in July of 2018.

2 **Q.** Thank you. And, Representative Clark, where were you
3 trying to vote?

4 **A.** I was trying to vote at the Lucky Shoals Recreation Center
5 in Gwinnett County.

6 **Q.** Representative Clark, could you please describe your
7 experience trying to vote in the July 2018 election for the
8 Court.

9 **A.** Yes. I woke up early to give myself enough time to go
10 vote before I went to work. When I got to the precinct, I gave
11 them my ID -- I filled out the paper, and I gave them my ID,
12 and they typed my information into the e-pollbook. And the guy
13 tells me that I'm in the wrong place and that I need to vote at
14 the Korean church up the street.

15 However, because I was very in tune with exactly where I
16 needed to vote, I had looked up this information countless
17 numbers of times and I knew I was in the right place. So I
18 told them no, I know I'm in the right place. This is
19 definitely my polling precinct.

20 And he turned to the poll worker sitting next to him and
21 was, like, you know, what do you think is going on? I showed
22 them on my phone My Voter page where it said I was in the right
23 place. So they sent me over to the poll manager.

24 The poll manager then looked for my name to be on a list
25 of people I think that were new registrants, people who did not

1 vote or who were not registered in a primary but had registered
2 maybe for the runoff. But my name was not on that list, as it
3 should not have been because I had already been registered to
4 vote.

5 After that, I got on the phone. I called Stephen Day, the
6 Gwinnett County Board of Elections chair at that time, to tell
7 him what was going on with me. And I also called the Voter
8 Protection Hotline. And after a series of phone calls and
9 about 25 or 30 minutes, they told me to go try again.

10 I went in. They did the same thing they did the first
11 time. And then this time it showed that, yes, I do vote at
12 Lucky Shoals. And so then they gave me the card, and I was
13 allowed to vote.

14 **Q.** Thank you. Just to make sure I have all the facts
15 straight, Representative Clark, what were the poll workers
16 looking at when they informed you in the first instance that
17 you weren't at the right polling place and you needed to go
18 vote at the Korean church?

19 **A.** The electronic pollbook.

20 **Q.** And, Representative Clark, had you voted at the Lucky
21 Shoals precinct in the past?

22 **A.** Yes, I have. I had just voted in the primary.

23 **Q.** Thank you. How many poll workers did you observe trying
24 to look up in the electronic pollbook?

25 **A.** There were two there. It was a runoff. So there weren't

1 a lot of people there. So there were two poll workers.

2 **Q.** And how many times did you tell the poll workers that you
3 were sure that you were at the right polling place?

4 **A.** Multiple times. I was very adamant that I was in the
5 right place.

6 **Q.** In the first instance, were the poll workers offering you
7 a provisional ballot or any type of ballot?

8 **A.** No. We never -- they never offered me a provisional
9 ballot because, like I said, I was absolutely adamant that I
10 was in the right place. So they were just trying to figure out
11 what could have gone wrong.

12 **Q.** Representative Clark, do you think it might have just been
13 some kind of poll worker error where maybe they typed something
14 in wrong?

15 **A.** I don't think so. Because, as I said, there were two of
16 them. One of them tried. And then when I was adamant, the
17 other one kind of looked and made sure that the first one was
18 doing the right thing.

19 And then when I came back in after 25 or 30 minutes of
20 phone calls and I finally got back in and was able to vote,
21 they did the exact same process except this time it showed me
22 being in the right place.

23 **Q.** Representative Clark, are you certain that your vote in
24 the July 2018 primary was actually counted?

25 **A.** No.

1 Q. Representative Clark, did you observe any other voters
2 having an issue that day?

3 A. Yes. The interesting thing about my story is the first
4 two people -- the two people in front of me also were told they
5 were in the wrong place. And the reason why that stuck out to
6 me is because both of them in some capacity mentioned how it
7 was going to be a hardship for them to go to another polling
8 place, one saying she was on her way to work and another where
9 the guy said his wife gets off of work very soon before the
10 polls close and so he needs to know exactly where she needs to
11 go because she won't have time to go to multiple places.

12 Q. Representative Clark, how did you feel after -- after you
13 left the polling place?

14 A. The whole -- the whole situation was very concerning to
15 me. I had a lot of questions like, first of all, how could my
16 information change in that short amount of time. I asked those
17 questions to people on the board of elections. I didn't really
18 get any answers, you know -- any specific answers as to how it
19 could have happened. But -- so it left me feeling uneasy.

20 Q. In fact, do you make a recording describing your
21 experience later that day?

22 A. I did. So when I got to -- when I finally got to work,
23 when I got a break, I actually went on Facebook and did a
24 Facebook Live video explaining my experience and just giving
25 people the -- the tools to feel empowered when they go to the

1 poll. If they know where to go and they know they are in the
2 right place, letting them know don't leave, you know, make sure
3 that you do get to cast your ballot. Because I just don't want
4 people to leave without voting.

5 **Q.** And is that recording reflected in the declaration that
6 you submitted in this case?

7 **A.** Yes.

8 **Q.** Has your experience of trying to vote in the July 2018
9 election caused you to be more focused on issues related to the
10 administration of elections as a legislator?

11 **A.** Yes, it has.

12 **Q.** And have you been involved at all in the election
13 administration arena in the 2019 legislative session?

14 **A.** Yes, I have. So, for example, I am a member of the
15 Democratic caucuses voting rights caucus, as well as bicameral,
16 bipartisan voting rights caucus that we have in the Georgia
17 General Assembly. And also when there was legislation that
18 dealt with electronic voting or just voting in general -- any
19 type of legislation dealing with voting, I was pretty
20 hyperfocused in trying to stay abreast, including speaking to
21 House Bill 316.

22 **Q.** And what involvement did you have in the legislative
23 process when House Bill 316 was considered?

24 **A.** So I basically just listened. I listened in at committee
25 hearings. And I spent a considerable amount of time

1 researching and again speaking to the bill in the well in the
2 House floor.

3 **Q.** Representative Clark, have you reviewed election-related
4 legislation passed during the 2019 legislative session in
5 addition to House Bill 316?

6 **A.** Yes. I have also had an opportunity to look at House Bill
7 392 as well. It is a lot shorter than House Bill 316. But
8 yes, I have been trying to stay abreast as much as possible on
9 any legislation having to do with elections.

10 **Q.** Thank you. And after reading House Bill 392, do you think
11 the legislation will prevent experiences like the one you had
12 from happening in the future?

13 **A.** I am not certain of that, no.

14 **Q.** And why is that?

15 **A.** I think that while it -- the intentions --

16 MR. LAKE: Your Honor, I believe this testimony goes
17 beyond the scope of the witness' knowledge in terms of the
18 effect of the bill and the impact of the bill is beyond the
19 scope of what she can speak to. She is not an expert
20 testifying as to the --

21 MR. POWERS: We'll withdraw the question.

22 THE COURT: All right. Thank you.

23 MR. POWERS: Yes. No further questions.

24 THE COURT: Okay. Go ahead.

25 MR. RUSSO: Your Honor, I just wanted to point out

1 that it doesn't look like the clock has been moving.

2 THE COURT: Reset?

3 MR. RUSSO: Yes, ma'am.

4 THE COURT: How many minutes are we into it? And
5 let's reset the clock with the beginning of the defense
6 examination.

7 All right. We'll -- when we break, we'll all talk
8 about what the hours are. But can you reset it for --

9 CROSS-EXAMINATION

10 BY MR. LAKE:

11 Q. Good afternoon, Ms. Clark.

12 A. Good afternoon.

13 Q. My name is Brian Lake. I represent the defendants in this
14 case. I have a few questions for you. I would like to start
15 with one that I believe should be fairly straightforward.

16 Your testimony regarding the issues you had of voting
17 previously that's in reference to the July runoff election; is
18 that correct?

19 A. Yes.

20 Q. And did you vote in the most recent November general
21 election 2018?

22 A. Yes.

23 Q. That seems a silly question given your title. But I have
24 to ask it.

25 Were you on the ballot in November of 2018?

1 **A.** Yes.

2 **Q.** And did you experience any difficulties in the November
3 election of pollbook issues or anything else?

4 **A.** No.

5 **Q.** None? Thank you.

6 And going back to the July election, you mentioned in your
7 testimony, I believe, earlier that you contacted the Voter
8 Protection Hotline when you had the issue; is that correct?

9 **A.** Yes.

10 **Q.** Do you know what organization, if any, the Voter
11 Protection Hotline is affiliated with?

12 **A.** No, I don't know who -- I just know that there was a phone
13 number that you were told to call if you were having issues
14 voting. So that is what I did.

15 **Q.** Do you recall who provided you that number or where you
16 got that number?

17 **A.** Social media.

18 **Q.** Okay. Do you know if that number is run by the Secretary
19 of State's office or another organization?

20 **A.** I do not think it is run by the Secretary of State's
21 office. But I do not know.

22 **Q.** May I ask -- your election occurred in November of 2018;
23 is that correct?

24 **A.** Yes.

25 **Q.** And that is your first time being elected; correct?

1 **A.** Yes.

2 **Q.** And may I ask has your campaign ever received any money
3 from an organization known as Fair Fight?

4 **A.** Yes.

5 **Q.** And when was that?

6 **A.** In January of 2019.

7 **Q.** Okay. And may I ask how much was that donation for?

8 **A.** I do not remember. But if I am making a guess, I think it
9 was a thousand.

10 **Q.** Is a thousand dollar donation a large donation to your
11 campaign?

12 **A.** I have had larger. But I mean it is a considerable
13 donation.

14 **Q.** Considerable amount.

15 Ms. Clark, are you aware of -- are you aware that Fair
16 Fight Action, the organization that made a donation to your
17 campaign, has entered into a joint litigation and common
18 interest agreement with one of the plaintiffs in this case?

19 **A.** I'm not aware.

20 **Q.** That is news to you?

21 **A.** Yes.

22 MR. LAKE: Your Honor, I have here what we have
23 marked here as Defendants' Exhibit 2.

24 May I approach the witness?

25 THE COURT: Yes.

1 **Q.** (BY MR. LAKE) Ms. Clark, I have handed you what we have
2 marked as Defendants' Exhibit Number 2. I understand from your
3 testimony earlier you have never seen this document; is that
4 correct?

5 **A.** Correct.

6 **Q.** Okay. If you will turn to the second page of this
7 document, could you tell me according to this document the date
8 that is listed for the signatures attached to it.

9 **A.** January 7, 2019.

10 **Q.** Okay. And am I correct that this document reflects an
11 agreement between, as it states here, Fair Fight Action and
12 Care in Action and the counsel for Coalition for Good
13 Governance; is that correct?

14 **A.** Yes.

15 **Q.** Okay. And the January 7th date on this agreement is
16 contemporaneous with or close to the time that you received the
17 donation or your campaign received the donation from Fair Fight
18 Action; is that correct?

19 **A.** I did receive a donation in January of 2019.

20 **Q.** I'm sorry. 2000?

21 **A.** 2019.

22 **Q.** 2019. I'm sorry. And do you -- do you follow Fair Fight
23 Action's social media presence, or are you on any of their
24 mailing lists or anything to that effect?

25 **A.** I barely -- if it comes up on my social media, then I see

1 things if it pops up I guess if I am one of their targets. But
2 I don't know that I actually follow, like, their page or
3 anything.

4 **Q.** Do you subscribe or follow Fair Fight Action on Twitter?

5 **A.** I don't think so.

6 **Q.** Okay. Instagram?

7 **A.** I also don't think so. But if I'm being honest, I usually
8 have someone do my social media for me. So I do not know.

9 **Q.** That sounds good.

10 I should say: Leading up to your testimony today, were
11 you aware of any social media or mailings or did you receive
12 any communications from Fair Fight Action with relation to this
13 case?

14 **A.** No.

15 **Q.** Okay. So if Fair Fight Action sent a tweet or whatever it
16 is called on an Instagram -- I think it is called an
17 Instagram -- you did not receive that message?

18 **A.** No.

19 MR. LAKE: Your Honor, may I approach the witness?

20 THE COURT: Yes.

21 MR. CROSS: What is the relevance of all this? It
22 has been going on for a while.

23 MR. LAKE: Your Honor, I am almost done. But I do
24 believe that this is relevant to the extent that it goes to the
25 witness' bias or potential for bias as she has received

1 financial -- or her campaign has received money from an
2 organization that has entered into a legal agreement, a common
3 interest joint litigation agreement, with one of the
4 plaintiffs.

5 THE COURT: Well, you know, I'm going to let you
6 explore it. But I will say that -- I mean, is there any reason
7 that you have to believe that she didn't, in fact, back in
8 2018 -- none of this goes to whether or not she had this
9 experience in 2018 and that seems to be --

10 MR. POWERS: Your Honor -- sorry.

11 THE COURT: -- the gist of her testimony.

12 MR. LAKE: I understand, Your Honor. But the
13 testimony I believe did go beyond just her experience from July
14 of last year. She did testify to further actions that she had
15 taken in the legislature with relation to voting and, you know,
16 promotion of those efforts. I understand. I will be brief and
17 wrap this up.

18 THE COURT: Be brief. Because I really think the
19 gist of it, which we could have also had simply by virtue of
20 her affidavit, is that she had this experience in 2018.

21 MR. CROSS: Your Honor, could I clarify one thing?
22 Just so I understand, is the Secretary of State's office
23 suggesting to Your Honor that a state representative of Georgia
24 has been less than honest on the stand? Is that literally what
25 we just heard? Because it sounded like it.

1 MR. LAKE: I don't believe that is a proper
2 objection, Your Honor.

3 THE COURT: All right. I want to just -- ask your
4 question, and then we're going to be through, whatever the last
5 question is.

6 MR. LAKE: Your Honor, I'll move on entirely. I'll
7 move on entirely, Your Honor.

8 **Q. (BY MR. LAKE)** Let me just ask with regard to the November
9 election, which I believe you testified earlier, that you did
10 not receive -- you did not have any problems in your experience
11 in that election; correct?

12 **A.** Correct.

13 **Q.** And I am correct that you indeed won your race in November
14 of 2018; correct?

15 **A.** Correct.

16 **Q.** Do you have any reservations or doubts based on your
17 previous experience in July or in your research in anything
18 that your election was in any way tainted or a product of
19 either computer malfunction or technical issues?

20 **A.** I will say that I am hopeful that my ballot was cast
21 properly and everyone's ballots were cast properly. I am not
22 certain that they were.

23 **Q.** Okay. So sitting here today, you have some reservation
24 about even your own election?

25 **A.** I have reservations about the November 2018 elections in

1 general, yes.

2 MR. LAKE: I have no further questions, Your Honor.

3 MR. POWERS: No further questions.

4 THE COURT: Did Mr. Day ever get back to you?

5 THE WITNESS: Yes.

6 THE COURT: Did they explain to you what the problem
7 was or if it was --

8 THE WITNESS: They did not know what the problem was.
9 They tried to come up with some explanations. But the
10 overlying answer was we don't know what happened.

11 THE COURT: All right. Thank you very much.

12 Is this witness excused?

13 MR. POWERS: Yes, Your Honor.

14 THE COURT: Thank you very much.

15 MR. BROWN: Your Honor, the plaintiffs would call
16 Sara LeClerc.

17 COURTROOM DEPUTY CLERK: Please raise your right
18 hand.

19 **(Witness sworn)**

20 COURTROOM DEPUTY CLERK: Please have a seat. Loudly
21 and clearly state your full name, and spell your last name for
22 the record.

23 THE WITNESS: My name is Sara LeClerc. The last name
24 is L-E, capital, C-L-E-R-C. And Sara is S-A-R-A.

25 Whereupon,

1 SARA LECLERC,

2 after having been first duly sworn, testified as follows:

3 DIRECT EXAMINATION

4 BY MR. BROWN:

5 **Q.** Sara, good afternoon. What do you do for a living?

6 **A.** I'm an attorney.

7 **Q.** And who do you work for?

8 **A.** I work for myself. I have my own firm.

9 **Q.** And what was your role, if any, in the November 2018
10 election?

11 **A.** I volunteered to be a poll watcher with the Georgia
12 Democrats.

13 **Q.** And what was your understanding of what a poll watcher was
14 supposed to do?

15 **A.** First to observe to ensure that no eligible voter was
16 turned away from casting their ballot. Also to help resolve
17 any issues in partnership with the poll manager and other poll
18 workers. And also to document and report anything that seemed
19 out of the ordinary or didn't follow proper procedures.

20 **Q.** And on election day on November 2018, what was the name of
21 the precinct where you worked as a poll watcher?

22 **A.** I was poll watching at Allen Temple AME Church in Atlanta,
23 Fulton County.

24 **Q.** And after election day voting started, do you recall a
25 voter voting on the electronic machine asking for help?

1 **A.** Yes, I do.

2 **Q.** Can you explain that to the Court, please?

3 **A.** Yes. There was a rather elderly woman voter who had been
4 walking with a cane. She was at one of the voting stations and
5 kind of signaled around the area that she was looking for help.
6 So the poll manager, Angela, went over and started assisting
7 her at the voting machine.

8 **Q.** And then what happened after that?

9 **A.** Well, the manager --

10 MS. RINGER: Objection, your Honor. Hearsay.

11 MR. BROWN: I said what happened after that.

12 THE COURT: You can describe what happened -- I'm not
13 going to consider the statement for the truth of the statement.
14 But try to just explain what happened.

15 **A.** Sure. So the manager was at the voting station or voting
16 machine with the voter for a little while. And then the
17 manager went back to her -- her own desk, and the voter stayed
18 at the machine.

19 **Q.** **(BY MR. BROWN)** Did you speak to the manager about what
20 was happening?

21 **A.** Not at that time, no.

22 **Q.** Did you speak to the manager later?

23 **A.** I did. Because the manager had gone back a second time to
24 the voting machine while the voter was still there. They were
25 together for a while. After the voter left the voting machine,

1 the manager started shutting down that machine and closing it
2 up to take it out of use.

3 **Q.** Did you -- what did the manager tell you about what
4 happened at that voting machine?

5 MS. RINGER: Objection, Your Honor. Still hearsay.

6 MR. BROWN: Your Honor, that is a statement by an
7 opposing party. He is a Fulton County agent working within the
8 scope of his responsibility. And therefore it is not hearsay.

9 THE COURT: You may proceed.

10 **A.** The manager told me that the -- I'm sorry -- that the
11 voter had -- when they got to the review screen of the page
12 that two of the races had not had any selection, including the
13 lieutenant governor and then one other race down the ballot.

14 So the manager had asked the voter if she had intended to
15 vote, which she had intended to. So the manager pointed on the
16 screen to the area for the lieutenant governor race so that the
17 voter could go back and complete her selection for that race.

18 The voter -- the manager told me that she had seen the
19 voter put her finger on the screen to go back to the lieutenant
20 governor race. But instead of the page going back there, the
21 screen showed that the whole ballot had been cast and submitted
22 to -- submitted.

23 **Q. (BY MR. BROWN)** So the ballot just self-cast before the
24 voter was done?

25 **A.** Exactly. It had self-cast. The area where the lieutenant

1 governor race touched on the screen was pretty far away from
2 where the submit ballot had been. So the manager said the
3 voter had definitely not pressed to submit the ballot.

4 **Q.** Did the poll manager take that machine out of service?

5 **A.** Yes, she did take it out of service right then.

6 **Q.** Did that machine ever get back into service?

7 **A.** Yes. The manager did put it back into service a little
8 later that afternoon.

9 **Q.** And what were the circumstances that might have required
10 that machine being put back into service?

11 **A.** Well, the lines were getting very --

12 MS. RINGER: That calls for speculation.

13 MR. LAKE: Objection.

14 THE COURT: Well, she can testify regarding her
15 observations. And let me just say we do not have a jury here.
16 And so everyone can object all you want. But you'll be using
17 up the time. But I think this is just her observations. So if
18 there is something that is really speculative, you can jump up.
19 But I also am capable of seeing it. Thank you.

20 **A.** At that time, the lines had grown really long because both
21 of the only two machines where voters could check in -- both of
22 them had gone down. And so the lines were getting really long,
23 backed up. And that is the time that the manager put that
24 particular voting machine back into service.

25 MR. BROWN: That is all I have. Thank you.

CROSS-EXAMINATION

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BY MR. LAKE:

Q. Good afternoon, Ms. LeClerc. Am I pronouncing that correctly?

A. Yes. LeClerc.

Q. I just wanted to clarify your testimony. When you stated that the manager told you that there was an issue with the machine, you did not observe the machine; is that correct?

A. Only from a distance. I couldn't see the screen of the machine itself.

Q. So you personally saw no malfunction on the machine?

A. No.

Q. Okay. And --

A. I was too far away to see anything like that.

Q. Okay. And you mentioned earlier that you had signed up to be a poll watcher with the Georgia Democrats; is that correct?

A. Yes.

Q. Did you receive any training in anticipation of your service?

A. Yes, I did.

Q. Okay. And what did that training entail?

A. One evening I went down to the Georgia Democrats headquarters, I believe is where it was. And they had, I think it was, about a two-hour presentation on what our duties were and all sorts of rules behind voting.

1 And then they also emailed us the presentation that they
2 had given, the PowerPoint, as well as some other guidelines
3 and -- for example, I was in Fulton County. So I had the
4 Fulton County rules for poll watchers.

5 **Q.** Did the training or the rules contain any information or
6 training in terms of technical aspects of voting?

7 **A.** I'm not sure exactly what you mean by that.

8 **Q.** Did it include any training or education in the operation
9 of a DRE or a voting machine?

10 **A.** Not -- I would say probably not technical but more just
11 what is supposed to happen, you know, what a person would
12 observe. Not like the computer functions.

13 **Q.** So in your poll watching, you were not looking for -- to
14 observe any technical malfunctions or operational issues with
15 the machines themselves; is that correct?

16 **A.** Only to report if something looked out of the ordinary. I
17 wouldn't be detecting an actual technical malfunction.

18 MR. LAKE: I understand.

19 Thank you, Your Honor. I have no other questions.

20 THE COURT: Thank you.

21 MR. BROWN: No further questions.

22 MS. RINGER: No further questions.

23 MR. BROWN: May the witness be excused?

24 THE COURT: Yes. Thank you very much.

25 THE WITNESS: Thank you.

1 MR. POWERS: Your Honor, the plaintiffs call voter
2 Kathy Polattie to the stand. Polattie, P-O-L-A-T-T-I-E.

3 COURTROOM DEPUTY CLERK: Please raise your right
4 hand.

5 (Witness sworn)

6 COURTROOM DEPUTY CLERK: Please have a seat. Loudly
7 and clearly state your full name, and spell your last name for
8 the record.

9 THE WITNESS: My name is Kathy Polattie,
10 P-O-L-A-T-T-I-E.

11 Whereupon,

12 KATHY POLATTIE,

13 after having been first duly sworn, testified as follows:

14 DIRECT EXAMINATION

15 BY MR. POWERS:

16 Q. Good afternoon, Ms. Polattie. Could you please tell the
17 Court where you live, Ms. Polattie.

18 A. Yes. I live in Midland, Georgia, which is ten miles from
19 Columbus, Georgia. It is Muscogee County and about 100 miles
20 from Atlanta.

21 Q. Thank you for taking the time to travel here and testify
22 today.

23 Ms. Polattie, are you registered to vote in Georgia?

24 A. Yes, I am.

25 Q. And, Ms. Polattie, did you attempt to vote in the

1 November 2018 election?

2 **A.** Yes, I did. I did vote.

3 **Q.** And were there any particular contests you were excited
4 about voting in during the November 2018 election cycle?

5 **A.** Yes. I was excited about Stacey Abrams. And I wanted to
6 vote for Sarah Amico, John Barrow for Secretary of State. And
7 Sanford Bishop, I wanted him to continue to be our -- our
8 representative.

9 **Q.** And had you done any research or preparation into those
10 candidates before you went to vote?

11 **A.** Yes. I went to hear Stacey Abrams and Stacey Evans debate
12 at Columbus State University. I already knew Sanford Bishop's
13 record. And I did look at the websites of John Barrow and
14 Sarah Amico to make sure that I agreed with them.

15 **Q.** And, Ms. Polattie, when did you vote during the
16 November 2018 election cycle?

17 **A.** Okay. I early voted on October the 19th, 2018, at the
18 Citizen Center in Columbus, Georgia. I went there with my -- I
19 took my mother-in-law with me so she could turn in her absentee
20 ballot. She does not feel comfortable voting on a -- voting on
21 a machine. She is 83 years old.

22 **Q.** And can you please describe your experience voting on that
23 day?

24 **A.** While voting, I was a few screens in and it hit me all of
25 a sudden that I had not seen Sarah Amico's name. And I --

1 excuse me -- I kind of in a -- kind of in a panic, I wondered
2 if I had missed her. But I truly did not feel like I had
3 missed her because I had been very careful. I was taking my
4 time. And I did not feel like I had missed her.

5 So I looked down to see if there was a back button or
6 previous button or an arrow. And there was not. My only
7 option was to go forward. So I thought at that point did I --
8 if I couldn't go back did I need to get a poll worker to help
9 me. I absolutely did not want to do that.

10 Then I thought, well, maybe -- maybe Sarah Amico would be
11 on the next screen. Maybe she wasn't where I assumed that she
12 would be right after the governor. And also I remembered that
13 there was a summary page at the end of the voting process, and
14 I hoped that I was right. So I kept on voting.

15 When I got to the summary page, I saw that I had not voted
16 for Sarah Amico. So I proceeded to mark that box. I checked
17 over my candidates. And I cast my ballot.

18 **Q.** Ms. Polattie, just to make sure I understand you, you are
19 saying -- is it true that when you went through your choices
20 for the first time you did not see the lieutenant governor's
21 race on the ballot?

22 **A.** Yeah. Right. I did not see her.

23 **Q.** And is it also true that when you were going through your
24 choices through the first time you did not see a back button
25 that would allow you to go back and look at previous screens?

1 **A.** Right. That surprised me and frustrated me.

2 **Q.** Ms. Polattie, do you think there's an alternative
3 explanation for why you didn't see the lieutenant governor's
4 race, such as a loose piece of clothing touching the screen or
5 perhaps accidentally you tapped the screen twice?

6 **A.** No. You know, I know the difference between pressing the
7 screen and tapping. And also I had on what I usually wear. No
8 dangling jewelry or sleeves to get in the way.

9 **Q.** Ms. Polattie, what method of voting do you plan on using
10 in the future elections?

11 **A.** Well, I like technology. But I think I might take
12 advantage of the absentee ballot in the future until things get
13 straightened out.

14 MR. POWERS: Thank you. No further questions.

15 CROSS-EXAMINATION

16 BY MR. LAKE:

17 **Q.** Good afternoon, Ms. Polattie. Am I pronouncing that
18 correctly?

19 **A.** Yes.

20 **Q.** My name is Brian Lake. I'm with the defendants. I just
21 wanted to clarify a couple of things about your testimony.

22 One, am I correct that you did ultimately vote in the
23 lieutenant governor's race in November of 2018?

24 **A.** I did.

25 **Q.** And did you -- you mentioned that you did not want to

1 contact a poll worker when you experienced troubles at the
2 polls. Could you tell me why.

3 **A.** I do not think that they are there to interfere with my
4 voting process. I don't think we're supposed to ask them for
5 help. That has always been my thought. And, you know, as I
6 stood there and I was thinking what was I going to have to -- I
7 would feel stupid. I know how to vote. I don't -- I should be
8 able to do this.

9 **Q.** If the lieutenant governor's race had not appeared on the
10 review screen and allowed you to vote, do you think you would
11 have contacted a poll worker?

12 **A.** Yes. At that point, I would have had to do that.

13 **Q.** But when you saw the race on the review screen and you
14 were able to vote, that was sufficient for you?

15 **A.** Yes.

16 **Q.** After the -- after you voted, did you contact anyone about
17 your experience voting or any troubles you experienced?

18 **A.** No. I felt like the problem resolved itself. And I did
19 not contact anyone. I did not say anything to anybody. I just
20 didn't give it another thought until -- until I heard about the
21 undervotes and I made the connection.

22 **Q.** And when was that?

23 **A.** I believe it was in November of 2018.

24 **Q.** And who did you contact, if anyone, at that point about
25 your experience?

1 **A.** I did not contact anyone. I saw an article posted on
2 Twitter. And I replied to it. And Ms. Marks messaged me, and
3 we had -- she asked me what happened.

4 **Q.** Okay. And is Ms. Marks Ms. Marilyn Marks; is that
5 correct?

6 **A.** Uh-huh (affirmative).

7 **Q.** And is that -- for lack of a better phrase, is that how
8 you came to submit the declaration?

9 **A.** Yes. Yes. She asked me would I mind giving -- doing an
10 affidavit.

11 **Q.** Okay. And did you prepare that affidavit?

12 **A.** Yes. I told her what happened. She said that they would
13 type it up for me after I told her what happened.

14 **Q.** Okay. And you reviewed that?

15 **A.** Oh, gosh, yeah.

16 **Q.** And that affidavit, what was the -- did you understand
17 what the intent or the intended use of that affidavit was?

18 **A.** That she would -- she would use it in her legal work or
19 that she -- I think I read about that she was -- that there was
20 a lawsuit at the time about problems with the machines and that
21 she would use it in that.

22 **Q.** Okay. And were you -- did she contact you again or did
23 you hear from her again with regard to this lawsuit?

24 **A.** No.

25 **MR. POWERS:** Objection. Relevance. What are we

1 doing?

2 THE COURT: Overruled.

3 MR. LAKE: That is all the questions I have, Your
4 Honor. Thank you very much.

5 THE COURT: All right. May this witness be excused?

6 MR. BROWN: Yes, Your Honor.

7 MR. POWERS: The witness may be excused. Thank you.

8 MR. CROSS: Should we keep going, Your Honor?

9 THE COURT: Let's take a five-minute break. And who
10 is your next witness?

11 MR. CROSS: It is going to be Ms. Payton, the
12 security expert.

13 THE COURT: All right. Is Ms. Payton around?

14 MR. TYSON: She is, Your Honor.

15 THE COURT: Okay. All right.

16 MR. LAKE: Your Honor, just as one housekeeping
17 issue, I don't believe we have actually tendered any of our
18 exhibits.

19 THE COURT: I have been noticing this. You withdrew
20 Defendants' Exhibit 3; right?

21 MR. LAKE: Yes, that is correct.

22 THE COURT: Are there objections to any of the
23 exhibits? At the end of the day, you can all go through all of
24 them. But are there any objections?

25 MR. BROWN: No, Your Honor.

1 MR. CROSS: No, Your Honor.

2 That reminds me. I understand that Your Honor has or
3 at least Mr. Martin collected redacted versions of the risk
4 assessments that we used earlier. We should probably mark
5 those as separate exhibits because they are different in that
6 respect. We can deal with that later. But I just wanted to
7 make sure --

8 THE COURT: All right. Well, y'all need to sort it
9 out at the end of the day. And all of the exhibits offered
10 except for the last one are admitted.

11 MR. CROSS: Thank you, Your Honor.

12 THE COURT: I wish I had the numbers to reference.

13 MS. ANDERSON: I believe it is just 1 and 2.

14 THE COURT: Defendants' 1 and 2. And how many are
15 there for --

16 MS. CHAPPLE: 1 through 6.

17 MR. CROSS: We have 6 so far.

18 THE COURT: All right. 1 through 6.

19 All right. We'll start again at 3:45.

20 MR. CROSS: Thank you, Your Honor.

21 MR. RUSSO: Thank you, Your Honor.

22 COURTROOM SECURITY OFFICER: All rise.

23 **(A brief break was taken at 3:37 P.M.)**

24 THE COURT: Please have a seat. All right.

25 MR. RUSSO: Your Honor, we have a quick housekeeping

1 item.

2 THE COURT: All right. Go ahead.

3 MR. RUSSO: The plaintiffs look like they have about
4 five witnesses left to call. Most of them are our experts. We
5 have three elections division -- excuse me -- county elections
6 officials left to go on our side still, one being from Chatham
7 County, one from Madison.

8 If we're not going to -- we kind of talked about this
9 already. It doesn't look like, depending on how long you want
10 to go tonight, we'll get to those three. Could we let them go?

11 THE COURT: It seems reasonable.

12 MR. RUSSO: Thank you, Your Honor.

13 THE COURT: They will be available to you tomorrow?

14 MR. RUSSO: Yes.

15 MR. CROSS: Your Honor, the plaintiffs call their
16 next witness, Theresa Payton.

17 COURTROOM DEPUTY CLERK: Please stand and raise your
18 right hand.

19 **(Witness sworn)**

20 COURTROOM DEPUTY CLERK: Please have a seat. Loudly
21 and clearly state your full name, and spell your last name for
22 the record, please.

23 THE WITNESS: Theresa Payton.

24 T-H-E-R-E-S-A P-A-Y-T-O-N.

25 Whereupon,

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THERESA PAYTON,

after having been first duly sworn, testified as follows:

CROSS-EXAMINATION

BY MR. CROSS:

Q. Good afternoon, Ms. Payton.

A. Good afternoon.

Q. Do you consider yourself an expert on election security?

A. Yes, Your Honor, I do, on certain aspects of election security.

Q. Specifically involving cybersecurity in elections?

A. Yes.

Q. And --

THE COURT: What aspects do you not feel like you're an expert on?

THE WITNESS: Well, it will depend as we go into sort of the context of different parts of it. But as it relates to cybersecurity, pretty much any hardware or software and sort of oversight of a process, we look at that at Fortalice Solutions, whether it is election security or any other process.

Q. (BY MR. CROSS) Ms. Payton, as someone with some expertise in election security, your biggest worry and concern going into the midterm elections of last year was that citizens would not trust election results and that the election process would lose legitimacy; right?

A. That is correct. I'm actually working on a book that I've

1 been working on the better part of two years around -- I call
2 it sort of the security of the ecosystem, everything from
3 campaigns, to the party headquarters, to how the different
4 states run things in the elections, as well as the manipulation
5 that occurred on social media.

6 **Q.** And going into the midterm elections of last year, you had
7 grave concerns about election interference; correct?

8 **A.** I did, yes. Still do.

9 **Q.** In fact, going into the midterms of last year, you believe
10 that one thing that we can be sure of is that a U.S. election
11 will be hacked, no doubt about it; right?

12 **A.** Yes. Now, as far as kind of --

13 THE WITNESS: If you don't mind, Your Honor, I would
14 like to give a little bit more context if you want it or I can
15 give more context later.

16 MR. CROSS: Since it is on my time, I would rather
17 her just rely on redirect.

18 THE COURT: That is fine.

19 THE WITNESS: Sure.

20 MR. CROSS: Thank you, Your Honor.

21 **Q. (BY MR. CROSS)** Did you watch any of the Congressional
22 hearings with Robert Mueller?

23 **A.** I listened to it first thing in the morning on the way in
24 to work. You mean the one that occurred this week, sir?

25 **Q.** Yesterday.

1 **A.** Yes. Then I had a very busy workday, so I didn't get to
2 watch it.

3 **Q.** But you are aware that he described again yesterday as he
4 has before that interference in U.S. elections by Russia and
5 others he identifies as a grave concern that all Americans
6 should be concerned about; right?

7 **A.** Absolutely.

8 **Q.** Of course, you agree?

9 **A.** I do agree.

10 **Q.** You are aware that he reiterated just yesterday that
11 Russia is actively trying to hack U.S. elections as we speak?
12 You are aware of that; right?

13 **A.** I did not hear him say that. But I know that that is the
14 position of the FBI, and it is the position of the
15 cybersecurity community.

16 **Q.** And Georgia elections you understand are still conducted
17 on electronic machines, specifically DREs? You are aware of
18 that?

19 **A.** Yes. As I understand it, yes.

20 **Q.** You agree that no electronic voting system is impervious
21 to interference?

22 **A.** Yes. No paper process is impervious to fraud and no
23 electronic -- nothing that is electronic is unhackable.
24 Everything is hackable.

25 And I say that coming from my banking background. You

1 have a paper process. It is fraught with fraud. You have a
2 technology process. It is going to be -- it is hackable.

3 **Q.** Well, you actually anticipated where I was going in your
4 discussion of paper. But you do agree that paper ballots are
5 the best fraud prevention though; right?

6 **A.** No. I mean --

7 **Q.** Didn't you write an article for the Hill on December 3rd,
8 2016, with the title Paper Ballot, the Best Fraud Prevention?
9 Did you write that?

10 **A.** Yes. As a backup, yes.

11 **Q.** Thank you. You understand that in the voting machines in
12 Georgia there is no paper backup for those machines? There is
13 no paper ballot, I should say, for what is used in the state
14 right now; right?

15 **A.** Can you describe what you mean? Because I know it prints
16 out receipts.

17 **Q.** Right.

18 **A.** So it has a running print. So what do you mean, sir?

19 **Q.** The printout of the receipt, all it is is an indication of
20 what is stored in the memory of the machine; correct?

21 **A.** Correct.

22 **Q.** So if the memory of the machine -- if the count is wrong
23 there, then the count will also be wrong on the paper ticker
24 that is printed out; right?

25 **A.** As I understand the architecture, yes.

1 Q. In fact, you have praised Wisconsin for the fact that it
2 uses paper ballots; right?

3 A. Yes. In the op-ed, that is correct.

4 Q. In the Georgia system, you mentioned a running print.
5 There is not actually a running print? There is just the
6 single total at the end; right?

7 A. That is -- as I understand it from the demonstrations I
8 have seen, yes.

9 Q. Now, you agree that suppressing even a relatively small
10 handful of votes, particularly in a local election with a small
11 number of voters, could be enough to change the outcome of an
12 election; right?

13 A. It is possible. You certainly don't want a single vote
14 suppressed.

15 Q. And you are aware of cyber attacks in 2018 on the
16 infrastructure that could actually suppress voter turnout in
17 the U.S.; right?

18 A. There is the possibility.

19 Are you referring to Illinois or a specific event or just
20 in general?

21 Q. Well, you're aware that in 2017 and 2018 security
22 researchers discovered that Russian hackers were probing the
23 U.S. electrical grid?

24 A. That is correct. Department of Homeland Security and
25 others went out to talk to the states that had those probes.

1 Q. And the Department of Homeland Security actually found
2 that the Russians got to the point where they could have thrown
3 switches, meaning they could have actually turned power on and
4 off; right?

5 A. That is what is reported in the unclassified reports.

6 Q. Obviously an election that relies on electrical machines,
7 like DREs or BMDs even, if the electricity goes down the
8 election goes down for however long the electricity is out;
9 right?

10 A. Well, I'm not aware of what the backup manual processes
11 are. A lot of organizations -- for example, if you have a cash
12 register and the electricity goes down, they go to a manual
13 process. So I guess it is going to depend on the precinct.

14 Q. And the manual process in an election would be a paper
15 ballot; right?

16 A. Yes.

17 Q. So just so we understand, the risk of tampering or
18 interfering with elections that rely on electronic voting
19 machines, you don't actually have to access the machines or the
20 election system at all? You could do it, for example, by
21 attacking the power grid; right?

22 A. Yeah. I mean, I think, you know, from an ecosystem
23 standpoint, what you could be looking at is you've got voter
24 websites and making sure they give the right information.
25 You've got the voter registration databases making sure that

1 people are registered to vote. I mean, you have a big
2 ecosystem with a lot of different potential points of failure.

3 **Q.** One of the concerns you have raised is states that are
4 still using old infrastructure -- you have identified that as a
5 serious vulnerability with elections; right?

6 **A.** Absolutely.

7 **Q.** And nowhere in the declaration did you -- in this case did
8 you offer any opinion that the current infrastructure in
9 Georgia is reliable and secure? You don't offer that opinion
10 in your declaration; right?

11 **A.** I'm a little confused. I'm sorry. What do you mean by I
12 don't offer an opinion? We have the redacted risk assessments
13 where we have done assessments of the infrastructure.

14 **Q.** We're going to talk about that.

15 **A.** Okay.

16 **Q.** Actually, you were here earlier for Mr. Beaver's
17 testimony; right?

18 **A.** No, I was not. I came in afterwards.

19 **Q.** Your risk assessments, which we are going to turn to in a
20 moment, those included the Secretary of State's network
21 including what you refer to as election-related networks;
22 right?

23 **A.** Yes.

24 **Q.** And, again, nowhere in the declaration that you submitted
25 to the Court do you offer an opinion that the current

1 infrastructure that is used for the election system in the
2 State of Georgia is secure and reliable? That is not in your
3 declaration; correct?

4 **A.** The challenge I think that you have with what you put in a
5 declaration is no system is 100 percent secure.

6 **Q.** Ms. Payton, just come back to my question. If you need
7 the declaration, I'm happy to hand it to you. My question is
8 straightforward.

9 **A.** I would love to look at it just to make sure I give you an
10 accurate representation.

11 MR. CROSS: May I approach, Your Honor?

12 THE COURT: Yes.

13 MR. CROSS: This will be -- I don't think we need to
14 mark it. Your Honor has it.

15 THE COURT: Right.

16 **Q. (BY MR. CROSS)** Review it if you need to. But I will tell
17 you there does not appear to be any stated opinion in there
18 that the current election system, the infrastructure of it, is
19 reliable and secure in the State of Georgia. Tell me if I'm
20 wrong.

21 **A.** Which section are you referring to?

22 **Q.** Anywhere. Anywhere.

23 **A.** So this declaration talks about the work that we have
24 conducted on behalf of Secretary of State Georgia, including
25 the risk assessment of PCC, the vendor.

1 Q. Ms. Payton, do you not understand my question?

2 A. I'm just trying to make sure -- I'm under oath. I want to
3 answer you honestly.

4 THE COURT: Well, just take your time to review it so
5 that you can answer him one way or the other.

6 A. Sure. So under Paragraph 6, I say, in the November 2018
7 reassessment, Fortalice determined that Secretary of State --
8 we abbreviate it SOS -- was documenting many operations
9 correctly and had a proper mindset towards the iterative
10 improvement of cybersecurity. So that refers to the National
11 Institute of Standards and Guidelines, the NIST standard.
12 During the on network red team penetration test, we were
13 stymied by certain controls already in place. So that talks
14 about the improvements that they have made.

15 For instance, it is common practice for a red team to
16 access networks as part of the rules of engagement by guessing
17 passwords. In the case of the Secretary of State, we were
18 unable to access the network through password guessing. That
19 was something we had observed as being a challenge earlier.

20 So I actually walk through to give sort of more
21 granularity around our assessment of how they are doing.

22 Q. (BY MR. CROSS) Ms. Payton, let me try my question again
23 because it is important.

24 I understand you provide a variety of findings on specific
25 things you did, and we're going to talk about what you did and

1 didn't do.

2 Here is my question: Nowhere in the sworn testimony you
3 have provided to this Court do you offer an ultimate opinion
4 that the current election system, GEMS, DREs, memory cards,
5 scanners, voter registration -- whatever you want to include,
6 but it includes those -- that it is currently secure and
7 reliable? That opinion does not appear in your declaration; am
8 I correct?

9 **A.** That is correct. And I would never say any system is
10 100 percent secure.

11 **Q.** That wasn't my question.

12 **A.** Okay.

13 **Q.** I didn't say anything about 100 percent. Do you
14 understand what I'm asking you?

15 **A.** Yes.

16 **Q.** So you have not offered an opinion that the current
17 election system at any level in your declaration -- not saying
18 perfect, not saying guaranteed. There is no opinion stated in
19 your declaration that it is secure and reliable to any degree?
20 That opinion does not appear; correct?

21 **A.** That is correct.

22 **Q.** Thank you.

23 Now let's talk about what you did do. Nowhere in your
24 declaration do you say that you conducted any cybersecurity
25 assessment of any GEMS servers; right?

1 **A.** That is correct.

2 **Q.** Nowhere in your declaration do you say you conducted any
3 cybersecurity assessment of any voter registration database
4 apart from what you did for the risk assessments; right?

5 **A.** That's correct. Also we did more than one risk
6 assessment. Which ones are --

7 **Q.** Correct. I understand. We'll talk through those.

8 Nowhere in your declaration do you say you conducted any
9 cybersecurity assessment of any electronic voting equipment
10 such as DREs; right?

11 **A.** That is correct.

12 **Q.** And the same for memory cards that go into DREs; right?

13 **A.** That is correct.

14 **Q.** Nowhere in your declaration do you say you conducted any
15 cybersecurity assessment of any AccuVote or election scanners;
16 right?

17 **A.** That's correct.

18 **Q.** Is your firm capable of that sort of assessment, the type
19 of looking, examining the reliability of things like DREs and
20 memory cards and scanners?

21 **A.** If we were engaged to do that, yes.

22 **Q.** So the state did not engage you to do that for your
23 declaration; correct?

24 **A.** Correct.

25 **Q.** In Paragraph 4 of your declaration, you talk about risk

1 assessments, including whether any attempts to penetrate
2 systems have been successful. If you need to take a look at
3 that, go ahead.

4 **A.** Uh-huh (affirmative).

5 **Q.** So we've heard a lot about it. But just to lay the
6 groundwork, you conducted, your team, three assessments in 2017
7 and 2018, one in October '17, one in February of '18, and one
8 in November of '18, for the Secretary of State; right?

9 **A.** That's correct.

10 **Q.** So the assessments you are talking about here in
11 Paragraph 4 -- you are talking about those assessments in
12 looking for attempts to penetrate -- to see whether penetrate
13 systems have been successful; right?

14 **A.** Uh-huh (affirmative). Yes.

15 **Q.** Just so we are clear, that work did not include examining
16 GEMS servers, DREs, memory cards, scanners; right?

17 **A.** That is correct.

18 **Q.** So I gather you were not engaged to do that analysis for
19 your declaration either; right?

20 **A.** That is correct.

21 **Q.** Or for those three risk assessments; correct?

22 **A.** Correct.

23 **Q.** In Paragraph 4 of your declaration, you say that the risk
24 assessments included an attempt to isolate malicious activity;
25 right?

1 **A.** Yes.

2 **Q.** You did not conduct that analysis for the purpose of those
3 risk assessments or your declaration with respect to GEMS
4 servers, DREs, memory cards, or scanners; correct?

5 **A.** That is correct.

6 **Q.** You could have, but you were not engaged to; right?

7 **A.** That is correct. They -- it was a different focus and a
8 bigger part of the ecosystem.

9 **Q.** In Paragraph 4, you also point out that your risk
10 assessments included an attempt to determine where any
11 malicious activity originates; right?

12 **A.** Yes.

13 **Q.** And as with the other, that assessment did not include
14 GEMS servers, DREs, memory cards, or scanners; right?

15 **A.** Correct.

16 **Q.** You could have done it, but you were not engaged for that;
17 right?

18 **A.** Correct.

19 **Q.** You participated -- strike that.

20 So let's talk about the October of 2017 assessment, which
21 is Exhibit 1. If you need a copy of it, let me know.

22 **A.** I would like to have it.

23 **Q.** Sure.

24 **A.** We write hundreds of reports every quarter. So I would
25 just like to have it.

1 Q. I understand. Are the exhibits still up on the stand? It
2 may be in front of you. It is Exhibit 1.

3 THE COURT: I think it is going to be larger than
4 that.

5 COURTROOM DEPUTY CLERK: Mr. Beaver took the exhibits
6 when he left.

7 MR. LAKE: We may have it. Which one are you looking
8 for?

9 THE COURT: Exhibit 1.

10 THE WITNESS: I don't have it.

11 THE COURT: He was ready to leave.

12 MR. CROSS: He was eager to get out.

13 Thanks, Bryan.

14 MR. TYSON: How many do we need?

15 MR. CROSS: Just one for her.

16 May I approach, Your Honor?

17 THE COURT: Yes.

18 Are you handing her a redacted one or not redacted?

19 MR. CROSS: This is unredacted just for her so she
20 has full context.

21 Q. (BY MR. CROSS) So, Ms. Payton, you have what has been
22 marked as Exhibit 1. And this is a copy of the assessment that
23 your team prepared in October of 2017 for the Georgia Secretary
24 of State; right?

25 A. Yes.

1 Q. And your team assessed the Secretary of State IT security
2 as Tier 2 on the NIST scale? I think you mentioned NIST a
3 moment ago; right?

4 A. Yes, sir.

5 Q. What that means is that awareness of cybersecurity
6 risks -- that they had an awareness of cybersecurity risks at
7 the organizational level but an organization-wide approach to
8 managing cybersecurity risks had not been established. That is
9 what that meant; right?

10 A. That is what it means, yes.

11 Q. And your team at that time identified 22 security risks in
12 the Secretary of State's IT operations; correct?

13 A. We did.

14 Q. And you characterized most of those as significant risks;
15 right?

16 A. We did.

17 Q. One of those risks was widespread local administration
18 rights or administrative rights; correct?

19 A. That's correct.

20 Q. And that meant that all Georgia Secretary of State users
21 who had any sort of log-in credentials were granted
22 administrative rights on their work stations; right?

23 A. Yes. In some cases, yes.

24 Q. And by administrative rights, that means they have the
25 ability to, for example, download software; right?

1 **A.** Yes. If they know that is there. Not all users do.

2 **Q.** You understood -- in fact, advised the Secretary of State
3 that this increased the likelihood that malware or a malicious
4 actor would be able to successfully compromise a user's work
5 station through email, web, or removal of media?

6 **A.** Yes. It is one of the first things we look for. This is
7 actually pretty common to see this vulnerability in private
8 sector firms and government organizations.

9 **Q.** Ms. Payton, the problem was particularly acute at the
10 Georgia Secretary of State though because users not only had
11 administrative rights on their own work stations but they
12 had -- any individual users had administrative rights on all
13 work stations? You found that; right?

14 **A.** In some cases, yes.

15 **Q.** This meant that an attacker who took advantage of having
16 access to the administrative rights could -- with access to a
17 single work station could quickly access any other work station
18 and gain administrative rights to spread malware, install
19 remote access tools, or access sensitive data? That is what
20 you found; right?

21 **A.** Yes.

22 Do you want some context, or you just want yes or no? I
23 just want to be respectful of your time.

24 **Q.** I appreciate that. I'm on the clock, and there are a lot
25 of really smart people across the aisle that will have lots of

1 good questions for you.

2 **A.** Okay.

3 **Q.** Another risk you identified was the lack of two-factor
4 authentication for remote access; correct?

5 **A.** Yes. That is correct.

6 **Q.** And that meant that the Georgia Secretary of State users
7 were able to remotely access the Secretary of State network
8 using only a user name and a password?

9 **A.** At that time, yes.

10 **Q.** And best practice, even as of this time, was to go to at
11 least a two-factor authentication? You recommended that?

12 **A.** Absolutely. Two-factor whenever you can do it.

13 **Q.** You found that this level of security was insufficient,
14 particularly given the possibility of fishing attacks or the
15 theft of credentials; right?

16 **A.** Yes.

17 **Q.** And this particular vulnerability involves remote
18 access -- people remotely accessing their Secretary of State
19 accounts outside of the office; correct?

20 **A.** Yes. This is something we very commonly find in many
21 organizations.

22 **Q.** Did you hear today that the Secretary of State relies on
23 individuals to design and develop GEMS databases working out of
24 their personal homes?

25 **A.** I did not. I don't think I was here for that, sir.

1 Q. Have you ever heard that before today?

2 A. I had not.

3 Q. So that is not something you evaluated for your risk --
4 either of the three risk assessments; right?

5 A. No. That is correct.

6 Q. That is not something you evaluated for your declaration;
7 correct?

8 A. Correct.

9 Q. Another risk that you identified was the use of nonunique
10 local administrator passwords; right?

11 A. That is correct.

12 Q. And that risk you advised the Secretary of State could
13 allow an attacker who compromises one work station on the
14 network to obtain the local administrator account credentials
15 and then use those credentials to gain access to any other work
16 stations or servers; right?

17 A. Yep. Again, this is a common attack vector that we see
18 attackers take. And it is something we very commonly see as a
19 deficiency in organizations.

20 Q. You keep saying that. But let's be clear. Nowhere in
21 your declaration do you state that the risk factors that you
22 have identified -- that those are present in the election
23 systems or in any way in the Secretary of State's office of any
24 other state? That does not appear in your declaration;
25 correct?

1 **A.** Correct.

2 **Q.** That also does not appear in any of the three assessments
3 that you did for the Secretary of State; correct?

4 **A.** What doesn't appear?

5 **Q.** That the risk factors that you have identified, that each
6 of those -- let's just take 2017. That the 22 risk factors you
7 identified, that you had conducted a similar analysis of a
8 Secretary of State and found the same risk factors? That does
9 not appear in your assessments?

10 **A.** That is correct. It does not.

11 **Q.** On the one we were just talking about, nonunique local
12 administrator passwords, when you did your third assessment,
13 which completed November 30 of 2018, you found that that one
14 was still present; right?

15 **A.** We did. It is very common. It is hard to get things
16 fixed. And sometimes the fixes break other things. So that is
17 why sometimes it is a little bit more complex than just turning
18 it on.

19 **Q.** But you did recommend in October of 2017 that they fix
20 that?

21 **A.** Yes, we did.

22 **Q.** So by the time we got beyond the midterm election of 2018
23 where 4 million voters in the State of Georgia voted, you found
24 that that assessment -- that risk was still present; correct?

25 **A.** That's correct. What I can tell you is these roadmaps

1 when we -- first of all, we get paid to find things. That is
2 our job. But secondly --

3 **Q.** Ms. Payton, I promise you are going to get an opportunity
4 to explain from them.

5 **A.** Okay.

6 **Q.** So we have the timing right, the 22 risks -- your team
7 identified these 22 risks and successfully even penetrated the
8 Georgia systems as reflected in your October 2017 report;
9 right?

10 **A.** Yes.

11 **Q.** And this occurred after it was widely publicly known that
12 Russia had attempted to interfere in the 2016 elections; right?

13 **A.** It was becoming more publicly known at that point. Yes.

14 **Q.** So then for the February 2018 assessment, that one focused
15 on the PCC technology which at that time owned and operated the
16 voter registration database; right?

17 **A.** Yes. That is correct.

18 **Q.** And they continued to own and operate the registration
19 database through the midterm elections of last year; right?

20 **A.** Yes.

21 **Q.** In fact, we heard today I think that only recently until
22 July of this year has there been efforts undertaken to switch
23 that and to give some more authority to the Secretary of
24 State's office? Had you heard that?

25 **A.** I was not in the room for that.

1 Q. In the February 2018 assessment, you identified 15
2 security risks with PCC involving the voter registration
3 databases; right?

4 A. I believe that is correct. I'm trying to flip -- do
5 you -- do you know where it is in here? I just want to make
6 sure.

7 Q. I think it is right in the front of the February
8 assessment. I think it is on the first page.

9 A. This is a thick document. So hold on a second. Let me --

10 Q. Do you have the February one up there, or do you need that
11 one too?

12 MR. TYSON: We have the February one.

13 THE WITNESS: Yeah. I just have the 2017.

14 MR. CROSS: May I approach?

15 THE COURT: Yes.

16 A. What page are you on?

17 Q. **(BY MR. CROSS)** I think it is the first. Let's see. If
18 you look at the second paragraph, you see it reads --

19 A. On Page 3?

20 Q. First substantive page, Page 3. Are you there?

21 A. Yes.

22 Q. Thank you. It reads, Cloudburst Security suggests
23 remediating the 15 identified security risks included in this
24 report. Do you see that?

25 A. Yes, I do.

1 Q. So does that refresh your recollection that as of the
2 February 2018 report your team had identified 15 security risks
3 with respect to the PCC and the voter registration?

4 A. Yes.

5 Q. As part of the assessment you did, you actually reviewed
6 the contract between the Secretary of State's office and PCC;
7 right?

8 A. Yes.

9 Q. And you found that the contract did not contain any
10 cybersecurity requirements at all; correct?

11 A. Yes. Also common oversight.

12 Q. But, again, there is no indication in this report that the
13 Secretary of State didn't need to take that seriously because
14 it just happens all over the country? That doesn't show up in
15 there; right?

16 A. Just because it happens other places doesn't mean I don't
17 take it seriously or tell my clients not to.

18 Q. Thank you. That would be the point.

19 You found that PCC was relying on outdated software that
20 was known to contain critical security vulnerabilities; right?

21 A. Correct.

22 Q. You noted that an attacker with sufficient time and
23 resources could exploit those vulnerabilities; right?

24 A. Yes.

25 Q. You identified certain remote access vulnerabilities as

1 well; right?

2 **A.** Yes.

3 **Q.** In particular, PCC did not block VPN connections from IP
4 addresses of known threat sources or foreign countries; right?

5 **A.** Correct.

6 **Q.** And you identified a number of missing critical operating
7 system patches, unsupported software, and vulnerable
8 third-party software; right?

9 **A.** Correct.

10 **Q.** Then you did a third assessment that was between September
11 and November 30 of 2018; right?

12 **A.** Yes.

13 **Q.** That actually --

14 **A.** May I have a copy of that just to be on the safe side?

15 **Q.** Yes, ma'am.

16 **A.** Thanks. Thank you.

17 MR. CROSS: I'm afraid Mr. Tyson is going to hand
18 me -- he is going to trick me here and give me something I
19 shouldn't show you.

20 **Q.** **(BY MR. CROSS)** So you have that one in front of you?

21 **A.** Yes, I do.

22 **Q.** And based on the assessment that you did that ended on
23 November 30 of 2018, you made 20 additional recommendations to
24 the Secretary of State to improve their cybersecurity; right?

25 **A.** We did.

1 Q. And according to your declaration -- I think it is
2 Paragraph 7 if you want to grab a copy.

3 Do you have that in front of you?

4 A. Yes.

5 Q. Of the risks outlined in the 2017 report, your team found
6 that as of the November 30, 2018, reassessment, you say three
7 risks have been remediated with compensating controls; right?

8 A. Yes.

9 Q. So 3 out of the 22 that you had identified in 2017 had
10 been remediated as of November 30; right?

11 A. Yes.

12 Q. And another three were in process; right?

13 A. Yes.

14 Q. Meaning that as of November 30, weeks after the midterm
15 election, your team found that of the 22, 19 had not been
16 remediated at all; right?

17 A. Correct.

18 Q. And 16 were not even in process; right?

19 A. That's correct.

20 Q. So you weren't here for Mr. Beaver's testimony, I believe
21 you said?

22 A. No.

23 Q. Mr. Beaver testified that he thought you were wrong about
24 that. So I'll ask you: Were you careful when you prepared
25 your declaration?

1 **A.** Yes.

2 **Q.** Were you careful when you conducted these assessments?

3 **A.** Yes.

4 **Q.** Did you adhere to professional standards when you
5 conducted each of these assessments?

6 **A.** Yes.

7 **Q.** Did you follow the scope of the work as it was laid out
8 for you?

9 **A.** Yes.

10 **Q.** And were you honest and accurate in the declaration you
11 provided here?

12 **A.** Yes.

13 **Q.** As you sit here today, do you have any reason to believe
14 that you're mistaken, that your team was wrong in saying only 3
15 of the 22 risks had been remediated as of November 30, 2018?

16 **A.** I stand by what I have in my affidavit.

17 **Q.** And when you prepared the November 30, 2018, risk
18 assessment, did anyone at that time from the Secretary of
19 State's office say to you, you've made a mistake, we have
20 actually remediated more?

21 **A.** No.

22 **Q.** And since you prepared your declaration, has anybody on
23 behalf of the state told you that your declaration was wrong in
24 any way?

25 **A.** No.

1 Q. We talked earlier that you mentioned NIST. You actually
2 provided a numeric score to Georgia Secretary of State as part
3 of your November 30, 2018, assessment; right?

4 A. Yes.

5 Q. And that score ranges from 0 to 100; right?

6 A. Which score?

7 Q. Well, you gave them --

8 A. Are you talking about the NIST score or the risk weighting
9 model that we use?

10 Q. It is the one -- if you look at the bottom, you see there
11 on the report it has your name and then there is a little
12 series of numbers, Payton and then zero zero zero.

13 A. Uh-huh (affirmative).

14 Q. Look at the one that ends in Page 112, if you will.

15 A. 120?

16 Q. 112.

17 A. I'm sorry. I feel dumb. I don't know what -- oh, you
18 mean from 2017. And then I'm looking for 112?

19 Q. Yes. Sorry.

20 THE COURT: Are we talking about 112 in the 2018
21 report?

22 MR. CROSS: Yeah. The 2018 report.

23 THE COURT: The November 2018?

24 THE WITNESS: Sorry.

25 MR. CROSS: The one you had.

1 THE WITNESS: I'm sorry.

2 MR. CROSS: It is Page 43 of your report, if that
3 makes it easier.

4 THE WITNESS: Yes. Thank you.

5 **Q. (BY MR. CROSS)** So here you have -- there is a chart, and
6 you give them a score based on your overall assessment; right?

7 **A.** Yes.

8 **Q.** And that score is between 0 and 100; right?

9 **A.** That's correct.

10 **Q.** What is good? 0 or 100?

11 **A.** 100, just like grade school.

12 **Q.** I figured. The score you gave them was only 53.98 on your
13 overall assessment; right?

14 **A.** Correct. It is a little different -- well, I'll just say
15 correct.

16 **Q.** Thank you.

17 **A.** Save you the time.

18 **Q.** You are very kind.

19 In October of 2017, your team expressed -- going back to
20 October '17, your team expressed an overarching concern for the
21 lack of control and oversight the state was able to maintain
22 over the voter registration database; right?

23 **A.** Correct.

24 **Q.** In February 2018, you identified, as we discussed earlier,
25 15 security risks involving the same registration databases;

1 right?

2 **A.** Yes.

3 **Q.** In fact, during the course of your assessments, you took
4 interview notes; right?

5 **A.** We do do interviews. Yes, we take notes.

6 **Q.** And do you recall during those notes you heard concerns,
7 for example, that PCC, which was managing and owned and
8 operated the registration database -- there was concern among
9 folks you interviewed at the Secretary of State that it was the
10 most problematic vendor based on the level of access that they
11 had?

12 **A.** Yes. Now, I'm doing that from memory. I could look at
13 the notes, but I do remember that.

14 **Q.** And in an interview -- you also interviewed Chris Harvey;
15 right?

16 **A.** I did not conduct the interviews. My team did.

17 **Q.** Fair enough.

18 **A.** But I reviewed -- but I do review the notes. If you need
19 me to look at it, I can.

20 **Q.** We're going to look at the notes in a moment. Would it
21 help you to have them first?

22 **A.** I would love to.

23 **Q.** Sure.

24 **A.** Thank you.

25 **Q.** If it helps you to take a look at them, you are welcome

1 to.

2 But just to set the stage, Ms. Payton, your team did
3 interview Chris Harvey, right --

4 **A.** Yes.

5 **Q.** -- as part of the assessment? And Chris Harvey you
6 understand is the head of elections for the Secretary of State?

7 **A.** Yes.

8 **Q.** And do you recall that he indicated --

9 MR. TYSON: I'm sorry. These were marked AEO. Are
10 we going to get into the specifics of them? I just want to see
11 how far we are going.

12 MR. CROSS: Not much. Only a couple of references.

13 **Q.** **(BY MR. CROSS)** Do you recall that Chris Harvey conveyed
14 during the interviews that he considered PCC the greatest
15 vulnerability that the state was dealing with?

16 **A.** Can you show me in his interview? I'm looking.

17 **Q.** Sure. So you're going to have to use these little numbers
18 again with your name.

19 **A.** Yes. I see 192 -- 191, 192.

20 **Q.** Yep. Go to 192.

21 **A.** Okay.

22 **Q.** You've got a good memory of the notes if you found it that
23 fast.

24 **A.** Is it about midway down? Who hosted? PCC vendor? Is
25 that the section you are referring to?

1 Q. I think so. If you start on 191 -- just so we're clear,
2 look at the bottom of 191. Do you see it indicates that these
3 are the notes of the interview with Chris Harvey?

4 A. Yes, I do see that. Yes.

5 Q. Do you see in the middle where you were looking -- do you
6 see in all caps who hosts it? Do you see that?

7 A. Yes.

8 Q. The answer is PCC vendor from 2012. Do you see that?

9 A. Yes.

10 Q. And to get there, again, we're talking about the voter
11 registration databases; right?

12 A. Yes. That's correct.

13 Q. And Mr. Harvey indicated at this time that, being the
14 voter registration databases, that is what Russian hackers
15 would want to get into? Do you see that?

16 A. Yes.

17 Q. So that was -- that feedback was at least among the
18 factors that you and your team considered in advising the
19 Secretary of State to remediate the risk that you found with
20 the voter registration database at that time; right?

21 A. Yes.

22 Q. You then did your November 2018 assessment. But at that
23 point in time having looked at the voter registration database
24 twice before and found a number of risk factors, by the time we
25 get to the timing of the midterm elections, the Secretary of

1 State directed you that PCC and the voter registration database
2 was out of scope for the November 2018 assessment; correct?

3 **A.** Yes.

4 **Q.** So we're clear, for the November 30, 2018, assessment,
5 coinciding with the midterm elections, you did not conduct an
6 assessment of PCC or the voter registration databases in the
7 way that you had for the prior reports?

8 **A.** Correct.

9 **Q.** Do you recall that your team interviewed Lorri Smith, the
10 chief operating officer?

11 **A.** I do. I don't remember the notes exactly.

12 **Q.** I can direct you if you need it. But do you recall that
13 she informed your team that she thought the state's weakest
14 link is their employees?

15 **A.** That is actually a common saying of the cybersecurity
16 industry, that the human is the weakest link.

17 **Q.** That was one of the things you heard here; right?

18 **A.** I didn't hear it here. I wasn't here for --

19 **Q.** Your team did?

20 **A.** During the interviews?

21 **Q.** Yes.

22 **A.** Yes. Yes. I mean, Secretary of State of Georgia was
23 incredibly candid and critical of themselves throughout the
24 interviews.

25 **Q.** Which, again, is what helped you identify 22 risks in

1 October '17, 15 risks in February of '18; right?

2 **A.** Yes.

3 **Q.** Do you recall that Chris Harvey said during his interview
4 that if he were king for a day he would have Georgia implement
5 a paper-verifiable voting system? Do you recall that?

6 **A.** I don't, but that sounds like him.

7 **Q.** If you look --

8 **A.** I'm sure it is in here.

9 **Q.** Look at the page ending in 170.

10 **A.** I don't know why I can't find it because I was just
11 looking at it.

12 Is it in the notes page, sir?

13 **Q.** It is in the notes. And --

14 **A.** Mine starts with 187 on the bottom right-hand corner.

15 **Q.** Does it start with 153?

16 **A.** No. I start with Ryan from legal with my stack.

17 **Q.** Okay. It is all right. We'll move on. Sorry about that.

18 **A.** No problem. Thank you.

19 **Q.** Sorry. I didn't realize --

20 **A.** Yes.

21 THE COURT: I just want to confirm. The 2018
22 November report, the work was done between September 17 as the
23 report indicates and November 30 of 2018; is that right?

24 THE WITNESS: Yes.

25 THE COURT: So when you give a -- the report says --

1 it says November 2018. Does it mean you produce it on
2 November 30, or does it mean --

3 THE WITNESS: Yes. It is when we produced the
4 report.

5 THE COURT: All right. But you were doing the work
6 during the election?

7 THE WITNESS: Yes.

8 **Q. (BY MR. CROSS)** Ms. Payton, we are just about done. If
9 you turn to the document we just gave you -- we'll mark all of
10 this in a moment. That is the one that begins with the little
11 Number 153 at the bottom. Do you see?

12 **A.** Yes.

13 **Q.** Turn to the page ending in 155. Do you see that?

14 **A.** Yes.

15 **Q.** Do you see there the caption king for the day?

16 **A.** I do. That is actually a question we ask in every
17 interview.

18 **Q.** We noticed -- yes -- in each one.

19 In here, Mr. Harvey indicates in .3 that what he would
20 seek as king for the day is a paper-verifiable voting system.
21 Do you see that?

22 **A.** I do.

23 MR. CROSS: And we would move into evidence the
24 notes, which will be -- what number are we at? The first one,
25 which begins -- Exhibit 7 is the one that begins with Payton

1 153. And Exhibit 8 would be --

2 THE WITNESS: It says 187.

3 MR. CROSS: On the front? Thank you.

4 THE WITNESS: You're welcome.

5 MR. CROSS: You are better at this than I am.

6 Exhibit 8 would be --

7 THE COURT: Are you looking to introduce all of the
8 notes or particular pages of notes?

9 MR. CROSS: We were going to introduce all the notes
10 so Your Honor has the complete set. We have only highlighted
11 particular portions. But since they underlie the assessments,
12 we thought Your Honor would have them.

13 MR. TYSON: Your Honor, I don't have an objection to
14 the notes coming in. The concern is if we could redact some
15 pieces of it. I know that Ms. Payton when she is doing the
16 interviews and her team -- they offer anonymity to the
17 interviewees so they can be frank and obtain the self-critical
18 analysis they need to obtain.

19 THE COURT: Why don't y'all discuss that. I'll admit
20 it subject to redactions that you agree. And if you don't
21 agree about something, you know where to come.

22 MR. CROSS: Thank you, Your Honor.

23 DIRECT EXAMINATION

24 BY MR. TYSON:

25 Q. Good afternoon, Ms. Payton.

1 **A.** Good afternoon.

2 **Q.** Thank you for being here. Bryan Tyson for the state
3 defendants.

4 We'll get some context here and work through some of the
5 things for you. So, first of all, I wanted you to, if you
6 could for the Court, just explain a little bit about the types
7 of security work that you have done up to this point in your
8 career.

9 **A.** Sure. Absolutely. So I spent the first 16 years in the
10 financial services industry. I had responsibility for
11 developing emerging technologies for the bank that were
12 customer facing, in addition to having fraud risk and security
13 as part of my responsibilities. So if that gave you mobile
14 banking, I also had responsibility to make sure you loved it
15 and make sure it was secure.

16 Then I worked for President George W. Bush. I was the
17 first female chief information officer to ever serve and the
18 only unfortunately at this point. But one can always hope. I
19 was there 2006 to 2008. I ran all of the technology and
20 operations for the executive office of the President. That
21 includes the White House, the 18 acres proper, the 13
22 components that make up the executive office, Camp David, all
23 of the unclassified systems on Air Force One and Marine One,
24 the presidential residences, vice president residences, as well
25 as the international and advance trips. So all of the

1 technology for those significant security events.

2 After leaving the White House, I started Fortalice
3 Solutions. And we have three portfolios of work. One
4 portfolio is classified contracts for the U.S. Government. And
5 so we have three-letter agencies, as well as one of the
6 branches of the U.S. military. We also have a brand promise.
7 We never mention who our clients are publicly.

8 And then private sector practice, we serve the Fortune
9 500. We do everything from offensive threat hunting, ethical
10 hacking, the proactive side, like these risk assessments. We
11 also help them with the fixes. And we do incident response
12 forensics and expert witness testimony.

13 We have a third element. And the third element of what we
14 do is we actually do people protection. So people in the
15 public eye, we have helped people who were thinking about
16 running for President. We have done musicians, athletes,
17 celebrities -- anybody who needs their digital tracks protected
18 or needs sort of care and concern.

19 I don't know if that is what you wanted for an overview.

20 **Q.** Thank you. And you have specialized training -- I'm
21 sorry. What specialized training and experience do you have
22 related to cybersecurity?

23 **A.** So I -- my graduate degree is from the University of
24 Virginia. I have a master of science in management information
25 systems. And then kind of on-the-job training over 30 years of

1 experience now of developing and designing -- we stood up the
2 first ever 24 by 7 security operation center at the White House
3 in 2006 to 2008. So building everything from the ground up.

4 **Q.** And do you have specialized knowledge about cybersecurity
5 that is beyond the skill of a person lacking your training and
6 experience?

7 **A.** I do. I mean, part of it is we have worked on some of the
8 most sensitive incident response and forensics efforts that
9 didn't make the newspaper, as well as a few. So we have -- so
10 two cases I can talk about publicly because the client has
11 asked me to on their behalf: We have one of the largest
12 insider threat cases, USA vs. Wiwin (phonetic). He is in the
13 jail of Charlotte, North Carolina, based on our forensics work
14 and our cooperation with the FBI on that case.

15 The other case that we worked is Mecklenburg County. They
16 were a victim of ransomware lateral movement. And we were
17 brought in to do the forensics, figured out how they got in,
18 what they were doing. That was actually the first case that
19 anybody had observed that cryptocurrency miners had actually
20 deposited cryptocurrency mining software in addition to
21 ransomware. So we tend to be on the cutting edge of that.

22 We also do pro bono work for law enforcement, including
23 ending child trafficking and child exploitation. So we work on
24 a lot of cases with National Center for Missing and Exploited
25 Children and the three letters around that work.

1 Q. Thank you. Are there reliable principles and methods
2 utilized in evaluating cybersecurity organizations?

3 A. Yes. Absolutely. A couple of different things. NIST is
4 one thing we have mentioned here today. That is not the only
5 standard.

6 THE COURT: Could we just stop for one second. Do
7 plaintiffs agree that this witness is an expert in terms of her
8 area of expertise or not?

9 MR. CROSS: I was debating in my head whether to
10 stand up and help with that, Your Honor. On behalf of Curling
11 plaintiffs, we're not objecting to her as an expert in
12 cybersecurity risk assessments.

13 Going beyond generally into elections -- I don't know
14 if that is where they are going. I would object only because
15 that doesn't appear in the case. The only expertise they have
16 offered is looking at the internal infrastructure. Mr. Beaver
17 himself said this morning that what she looked at only
18 tangentially related to the election networks. So I don't see
19 the relevance of anything beyond just general cybersecurity and
20 infrastructure -- in an IT infrastructure.

21 MR. TYSON: Your Honor, we would be offering her as
22 an expert in cybersecurity and intelligence operations, such as
23 Fortalice conducts.

24 MR. CROSS: For elections specifically or just for IT
25 infrastructure?

1 MR. TYSON: Cybersecurity for IT infrastructure.
2 Since we have DREs that are computers, that is a part of it.
3 But there is interaction with the computer system.

4 MR. CROSS: I have to object to that, Your Honor.
5 Again, one, she didn't look at that in this case in her
6 declaration. And, two, there is no evidence that she did any
7 examination like that at any point. So relevance and
8 expertise.

9 THE COURT: The only thing is -- the reason I ask was
10 I asked Ms. Payton on the phone when we were having one of
11 those discovery disputes whether she had any other states as --
12 in an election context as -- or other entities as clients. You
13 indicated no at that time.

14 So I mean, there is no doubt she's a cybersecurity as
15 a whole expert. It is the question of being an elections
16 expert within that -- that subfield of that. So that is --
17 that is what I was just trying to get clarified.

18 And I don't have any problem with her testifying
19 about general principles of cybersecurity or anything that
20 she's worked on here, which she obviously has knowledge of.
21 But if we're going to go into something specialized about
22 election issues, then we just tread in a different way.

23 MR. TYSON: Thank you, Your Honor. We can proceed
24 with that.

25 THE COURT: All right. Very good.

1 **Q.** (BY MR. TYSON) Ms. Payton, if you were advising a new
2 client about general security principles, where would you start
3 generally for someone who is engaging your firm to help them
4 with cybersecurity?

5 **A.** Sure. Absolutely. So one of the things we do is we sit
6 down and we say, who is using the technology? What is it used
7 for? What are the regulatory bodies that you are responsible
8 and held accountable to? Because NIST doesn't -- NIST is one
9 framework. And it doesn't hit everything that you need to hit.

10 So then we would try to understand what are the security
11 and privacy frameworks you are held accountable to. The next
12 thing we would talk to them about is what do you want the user
13 experience to feel like. Because the best security is the kind
14 where it is not in their face where they want to actually work
15 around the security.

16 And then once we have done that, we typically advise that
17 there is a difference between popping the hood and looking at
18 an engine when a mechanic does that -- and that is really what
19 we were doing in the first assessment -- and then doing the
20 interviews and talking to people.

21 Really truly doing sort of that red team analysis, you
22 actually have to turn the car on like a mechanic would do. You
23 have got to drive. You have got to drive fast, drive slow, and
24 stop. So that is typically -- not every client is ready for
25 that the first time you work with them. They don't have the

1 level of maturity to do anything with the findings that you
2 have. They are not ready.

3 So that is why oftentimes we do what is called like a
4 static technical assessment first. We look at the policies and
5 procedures. We do the interviews. We give them an action
6 plan. And then when we come back, it is not too -- some of
7 them have us come back and reassess exactly what we did. But
8 some of them say, I have limited time, limited money. Can you
9 look at something new or look at something tangent?

10 **Q.** When you are looking at the security of any computer
11 system, do you generally categorize them as a secure system and
12 an insecure system or is there some other way that you look at
13 that?

14 **A.** It is a spectrum. So everything -- and the goal posts
15 move unfortunately because cyber criminals change their
16 tactics. For example, when Windows 10 shuts down a certain
17 vulnerability, they don't say, well, gosh, that's really hard
18 now. I should bake pies for my neighbors. They look for the
19 next vulnerability that hasn't been talked about and hasn't
20 been fixed yet. The goal post moves.

21 It is really just a matter of -- a mature -- we call it a
22 capability maturity model. So it is really moving along that
23 capability maturity but understand the industry every year
24 resets the goal post.

25 So you think you're at the ten-yard line. You are not.

1 Q. Have you ever had a client where you found zero
2 vulnerabilities on an assessment?

3 A. No. No. We wouldn't have earned our pay if we didn't.
4 We always find something.

5 Q. When you say you always find something, does the number of
6 vulnerabilities tell you how secure or insecure an organization
7 is?

8 A. Not necessarily. You know, in some cases -- so, for
9 example, even at the White House -- so we would actually have
10 the NSA come from the outside -- even though I had my own red
11 team, I would have a fresh set of eyes come. So typically from
12 the NSA. And, you know, one of the things you would find is
13 the list of vulnerabilities, sometimes they are fairly easy
14 fixes. Some of them are systems that need to be sunset. Some
15 of them are as you are implementing the next system you need to
16 let the vendor know so they can fix them.

17 So a long laundry list doesn't necessarily mean that
18 you're inherently insecure. But it does indicate that you have
19 a lack of maturity in your security program.

20 Q. So does this get back to the NIST rankings you were
21 talking about earlier?

22 A. Yes, it does. So we use the NIST rankings, and there's --
23 it is not really like A, B, C, D, like grades. It is more
24 again that capability maturity, on that spectrum. I can also
25 tell you most companies never achieve four. It costs too much,

1 too complex, too expensive, not enough staff.

2 **Q.** In your assessments of the Secretary of State's office,
3 what have you found from 2017 to 2018 as you have worked with
4 them regarding their missed rankings and status?

5 THE COURT: Could you state what NIST stands for
6 again for the record. Because I know it now. I may not know
7 it another day.

8 THE WITNESS: It is the -- I always forget what
9 the -- it is the National Institute of Standards and
10 Technology. So it is the federal government standards. And
11 actually a lot of international companies use NIST as a
12 framework.

13 **Q. (BY MR. TYSON)** So getting to the question, in terms of
14 your assessments from 2017 to 2018 and your work with the
15 Secretary of State's office, how has the NIST rankings changed?

16 **A.** When we first met them, we sort of put them just barely at
17 a Level 2, which means there was some awareness, it wasn't
18 repeatable, it wasn't deep enough.

19 When we came back for the assessment in three, there are
20 still things that need to be fixed. But when we came back with
21 that third assessment, we said that we felt that they had
22 achieved very entry level still -- but achieved a level of a
23 three. And they still have a lot of work to do within the
24 spectrum of that -- it is not like you hit a three and you are
25 great. Three is a long kind of corridor to go down.

1 **Q.** So in terms of becoming a three, have you continued your
2 work with the Secretary of State's office since the
3 November 2018 assessment?

4 **A.** Yes. As they have engaged us on different advice and in
5 different projects -- and so one example, one improvement, that
6 we did see is when we did our red team assessment, which is our
7 ethical hacking assessment, one of the things we wanted to do
8 was to set up what is called a command and control. Because
9 that is actually a typical type of approach that nation states
10 and cyber criminal syndicates use.

11 What command and control is it is almost as if I was the
12 custodian of a building and I put the uniform on and I had the
13 master key and everybody trusts me and they let me do things.

14 We had hypothesized in our first assessment that if they
15 didn't make some of these changes that a command and control
16 would be very -- you know, something that somebody with skill
17 and knowledge and time could pull off. So that is the first
18 thing we went after.

19 What we observed in that 2018, the third assessment we
20 did, was, first of all, we weren't able to guess the passwords.
21 So there had been some maturity around password maturity. So
22 then we had to go to social engineering and tricking people
23 into clicking on links.

24 I can tell you 100 percent of the time we are very good at
25 what we do. People always click on my links. I usually go

1 after the chief information security officer. I almost always
2 get them, almost always get the CEO.

3 Even though they clicked on the links, we were not able to
4 use that to establish the command and control, which is
5 typically what we do. Oftentimes, within an hour to eight
6 hours, we own many of kind of the Fortune 500 networks by using
7 that tactic.

8 **Q.** So as I understand your process, you then kind of take
9 that assessment, you go in as a red team, look for the
10 vulnerabilities. When you have identified vulnerabilities for
11 clients at a high level -- and we'll get into the specifics of
12 the office in a minute.

13 But at a high level, what then is the next step for an
14 organization when you have told them here are the
15 vulnerabilities?

16 **A.** So, now, what is interesting what -- so sometimes it
17 happens that it is in a report and we do a report out and we --
18 we want to walk in the shoes of our clients. So we typically
19 lay out a report with the likelihood it is going to hit you and
20 how bad it is going to be if it hits you. And then we actually
21 put together an action plan, as if we were implementing it.

22 So we say, if we were you, we would start here, we would
23 go here, we would go here. That is not always a reality for
24 our clients.

25 In this particular case, the 2018 assessment, they

1 actually took us up on one of the service offerings we have.
2 Instead of just doing that where we do the assessment, you get
3 the static report, we actually did what is called more of a red
4 team, blue team. That allows us to coach, train, and mentor as
5 we go. That is a more complicated assessment because they have
6 to be on hand. They are watching us do our trade craft, and we
7 are telling them while we are in there what they need to do to
8 shut us out so that somebody else doesn't do the same thing.

9 So they actually got some realtime feedback on coaching
10 and training while we were doing that red team because we did
11 it as more of kind of almost -- like we call it a purple team.
12 So it was a red team and blue team together.

13 But yeah. That is really -- to me, I think that really
14 speaks volumes of how much they want to improve. They are just
15 limited by time, resources, and talent.

16 **Q.** Well, I'm sure you face situations where clients identify
17 the vulnerability and had some constraint -- a budget
18 constraint or other kinds of things.

19 What do you do in those kinds of scenarios?

20 **A.** Oftentimes, our clients will identify -- we'll actually
21 give them a roadmap. A lot of clients would love to be
22 aggressive. But it takes 24 months before they get to
23 everything on the roadmap.

24 So what we often do is tell them here is how you can fix
25 this in a low cost, no cost way. And we typically talk to them

1 about people and process. And oftentimes people and process
2 can be a great interim solution until you can get a technical
3 fix.

4 **Q.** So when you say people and process, is that a
5 non-technological way of fixing a technical vulnerability?

6 **A.** Yes. So, for example, what you can say is like maybe you
7 are stuck with the system that you have for how people access
8 systems, including the election database or the website and how
9 that gets launched. You may be stuck with that directory
10 structure and you may be stuck with the software you have
11 because you're waiting for more funding to come in to upgrade
12 that.

13 So what you can do is you can actually go
14 person-by-person-by-person and limit their access. So until
15 you get to a more ideal solution, you can create this manual
16 workaround.

17 Another potential manual workaround can typically be a
18 process to say this one person does something and somebody else
19 checks it. You can set into place creating manual logs, logs
20 that actually will capture events. And then someone, of
21 course, has to analyze those.

22 But there is always usually some type of a manual
23 workaround or fix that our clients can put in place until the
24 technical solution is available.

25 **Q.** One of the things that we heard discussed earlier today

1 was something called end point protection. Can you tell us a
2 little bit about what end point protection is?

3 **A.** So end point protection is -- so we always say that our
4 clients, they need a multilayered defense. So end point
5 protection allows you to -- if an attacker is actually trying
6 to send you, we call it, a payload -- so if they are trying to
7 send you a file that has malicious software or malicious
8 intent, that end point, if it is set up the right way, it is
9 actually looking at the traffic.

10 Almost think of it as a bouncer at a toll booth. So as
11 traffic is trying to approach some part of your infrastructure,
12 that end point will basically interrogate that traffic and
13 decide whether or not to let it through. It is not 100 percent
14 foolproof. But implementing something like end point can
15 really go a long way.

16 **Q.** Does end point protection protect things like USB drives
17 or emails? Does it cover all those kinds of things?

18 **A.** It depends on how it is set up and where it is set up.
19 Because you can put an end point at different places in the
20 architecture. So it is not like you just put a dome over
21 everything and like it is all great inside.

22 But you could set up end point in such a way that, yes, if
23 somebody were going to put a thumb drive into a work station or
24 a server you could have it set up to detect a problem. Again,
25 it is not always foolproof though.

1 MR. CROSS: Your Honor, I apologize. I think we're
2 beyond the scope of what she's offered in this case. I don't
3 see anything about end point in her declaration.

4 Dr. Shamos covered this. But I don't believe she
5 did, unless I'm missing it.

6 THE COURT: Is there something that --

7 MR. TYSON: Your Honor, we're offering her as an
8 expert on cybersecurity. Her declaration is a summary of her
9 testimony. This is pieces of the puzzle that she has done to
10 analyze the Secretary of State's system and to give advice
11 regarding the improvements in the cybersecurity structure. So
12 we think it is relevant to your consideration. I don't think
13 we are limited to just her declaration alone.

14 MR. CROSS: Well, it has got to be within the scope
15 of the declaration. I'm happy to hear where it is. I just
16 don't see how it relates to what she says in her declaration
17 about these three assessments.

18 MR. TYSON: Your Honor, if we need to go through the
19 assessments, I'm sure we can get the end point protection
20 reference in the assessment. I can find that for Mr. Cross if
21 he needs it.

22 THE COURT: I believe it would probably be helpful
23 for him if you have it. I was looking for that.

24 There was a lot about access issues. It might be
25 there.

1 MR. TYSON: Your Honor, I can move on to a different
2 topic. If you want to do that, that is fine.

3 THE COURT: I mean, I'm going to allow everything she
4 has talked about so far.

5 **Q. (BY MR. TYSON)** Let's talk a little bit more about what
6 the Secretary of State's office retained you to do in these
7 reports.

8 Before I get into the reports, I want to ask you about
9 your declaration. Mr. Cross asked if you had opined on the
10 security of the election system.

11 Were you asked in your declaration to opine on the
12 security of the election system?

13 **A.** No.

14 **Q.** So let's go to the first risk assessment from
15 October 2017. In that risk assessment on Page 3, there were
16 ten identified vulnerabilities. Mr. Cross asked you about,
17 Number 1, widespread local admin rights and, Number 2, lack of
18 two-factor authentication.

19 Can you give a little bit of context on those findings and
20 what you typically find in an organization on the cybersecurity
21 front?

22 **A.** Sure.

23 THE COURT: What page are you on? I'm sorry.

24 MR. TYSON: I'm sorry. On October 2017, Page 3, that
25 is the summary, Your Honor.

1 THE COURT: All right. Fine.

2 THE WITNESS: Yes.

3 MR. CROSS: Your Honor, I apologize. I have no
4 problem with her describing what she found. But I do object to
5 the latter part of the question on how that compares to what
6 she finds elsewhere.

7 She has already established she hasn't done this for
8 any other state. And there has been no basis to conclude that
9 whatever she does in the Fortune 500 sector is relevant in an
10 election context.

11 MR. TYSON: Your Honor --

12 MR. CROSS: I think we can all agree that what
13 private companies do with data is dramatically different than
14 what a Secretary of State has to do with election data.

15 MR. TYSON: Your Honor, I don't believe Ms. Payton
16 has testified she doesn't work for any other governments.

17 MR. CROSS: No. No. I'm sorry. I thought -- my
18 recollection was the same as Your Honor's. She has not done
19 any sort of assessment like she did here for another state or
20 any election system.

21 So if she wants to talk about her general practice --
22 or I'm sorry. If she wants to talk about what she did here,
23 that is fine. But they keep trying to draw these connections
24 to the private sector. And there is no basis for how that's
25 relevant, unless there they are suggesting that all they have

1 to do is what a private company does to maintain their data.

2 But I doubt the Secretary of State is going to
3 suggest that that is sufficient for their election system.

4 THE COURT: What is the focus of your inquiry? Is it
5 going to be all comparative to her clients? I mean, I thought
6 I went over the fact that I had some concerns about her doing a
7 comparative on the elections since she said on -- Dr. Payton or
8 Ms. Payton said she didn't represent and had worked for anyone
9 else in the election context other than the State of Georgia.

10 I'm not saying that cybersecurity principles are all
11 different. But I think more particularized -- and that
12 comparison seems to be outside -- would be outside the range of
13 what she would be able to properly discuss. So, you know, the
14 general operation -- the general cybersecurity issues are
15 certainly relevant. I know that may be too vague for you as
16 proper guidance.

17 MR. TYSON: Your Honor, maybe I can clarify. One of
18 the allegations that plaintiffs have made is that there are
19 these connections between the public side of the Secretary of
20 State's website and movement of things to the air-gapped areas
21 of the separate ballot servers.

22 And so the relevance of the cybersecurity of those
23 public-facing pieces of the Secretary of State's office is
24 relevant to the claims in this case. And that is what I wanted
25 to explore with Ms. Payton on what she has seen there.

1 If we don't want to compare to the private sector
2 that has to deal with HIPAA and banking and all that kind of
3 things, we can compare her to her other government clients, I'm
4 sure, just to see what she sees.

5 The allegation from plaintiffs has been that there is
6 this -- the Secretary of State's office is this outlier in
7 terms of a government with its vulnerabilities. And this is
8 trying to look at that question and whether that is actually
9 true.

10 THE COURT: All right. Just so we can discuss this
11 and no one feels like they are being unfairly dinged in time,
12 I'm just taking this discussion that started about two minutes
13 ago off the time clock until we are through.

14 MR. CROSS: Your Honor, again, the comparison they
15 are drawing has no relevance. Because her only experience,
16 even in a government setting, it is not election data. It is
17 not election security. That is the scope of the expertise that
18 would have to matter to say that what they have done here meets
19 constitutional requirements.

20 There are no constitutional requirements for whatever
21 the government might be doing for -- we don't even know what
22 yet they are talking about. There is no foundation, first of
23 all.

24 Private companies have no constitutional requirements
25 with respect to the data they maintain. So it is just a very

1 different thing.

2 The other point I'll make, Your Honor, is they chose
3 a horse for this. It was Dr. Shamos. Dr. Shamos is the expert
4 they chose to testify to this. And I think we all know why
5 they have chose another horse. Because when you hear his
6 testimony, you are going to find that he absolutely indicts
7 their system, including the point that Mr. Tyson --

8 THE COURT: All right. Let's not get into rhetoric
9 at this point. It would seem -- I'm either too quiet or too
10 loud.

11 MR. TYSON: I keep backing away also.

12 THE COURT: Well, I know that there are people in the
13 audience who feel I have been too quiet or move too far from
14 the microphone. So I'm trying to satisfy both.

15 Mr. Cross, it would seem though that the whole
16 question of how to interface -- that cybersecurity issues of
17 interface between an outward-looking interface and the need to
18 protect -- for protection would be common, even if it is a
19 different context.

20 There may be more concerns arguably about privacy
21 when you have an obligation to protect the privacy of a voter.
22 Though you have obviously a HIPAA context. You have that as
23 well.

24 But there are different contexts, and I recognize
25 that. But just simply the cybersecurity challenges of having

1 both an outward interface and one that is not would seem to be
2 at least from the cybersecurity issue to have some common --
3 major common strands.

4 And to the extent that is so, I will let her testify
5 that she was looking at that and obviously while there are
6 limits in what Fortalice looked at and certainly extreme limits
7 about what it looked at in combination with Cloudburst in 2018
8 in February -- and then they didn't choose -- not her fault but
9 the state chose not to look at it again, I take that -- I take
10 note of that.

11 But to the extent she looked at it, I think she can
12 testify about that.

13 MR. CROSS: To be clear, Your Honor, I have no
14 objection to her testifying to what she examined and what she
15 found. It seemed like where Mr. Tyson keeps wanting to go is
16 to draw a comparison to other contexts. She even was trying to
17 do it during the direct to say, well, this is common.

18 THE COURT: It would be more helpful to the Court at
19 this juncture for Ms. Payton to be just simply talking about
20 her findings rather than going -- because we don't -- yes, they
21 are a comparator. And she's obviously considered how does this
22 rank compared to others.

23 But mostly what she has is not how does it compare to
24 others in this report. But is it really significant? Does it
25 really matter? And that is the most important thing to me, I

1 think, at this juncture.

2 If there is something that's comparable, I'm not
3 going to completely prevent you from going into it. But it
4 shouldn't be the focus here, especially when there is nothing
5 either in her affidavit or in any of these materials that would
6 suggest that as the basis of her testimony. And she -- and
7 everyone here has foregone full expert reports. But I do at
8 least need to keep you a little roped in to what you have
9 notice of because, otherwise, we're going to be here forever
10 and I won't have a basis for understanding how did we get here.

11 Okay. Thank you.

12 MR. TYSON: Thank you, Your Honor.

13 **Q. (BY MR. TYSON)** Ms. Payton, when Mr. Cross was earlier
14 asking you to go to Page 12 of the October 2017 report, he
15 asked you about widespread local admin rights, the first
16 identified risk?

17 **A.** Uh-huh (affirmative).

18 **Q.** I believe you wanted to offer a little more context about
19 that. Can you do that within the confines of what the Court
20 has kind of established for what we're talking about?

21 **A.** Yes. So local admin rights, what that -- again, that's
22 sort of the keys to the kingdom. And what we observed is they
23 have actually made improvements in this.

24 What we observed when we were here the first time and
25 doing this was you had shared admin access, which means more

1 than one person could use an account and log in, which makes it
2 hard if you have got insider threat or issues to actually know
3 who did it. And then the other piece is making sure that
4 somebody can't use an account to escalate their privileges and
5 then basically go and look at everything else.

6 THE COURT: I'm sorry. Could you just turn it down
7 slightly -- the volume down slightly. Just get a little
8 further away from the microphone.

9 THE WITNESS: Get a little further away?

10 THE COURT: Yes.

11 THE WITNESS: Okay. Thank you.

12 **A.** So the other thing I would like to kind of explain is when
13 we look at local admin rights one of the things we think about
14 is like if you think of your house. If you lock the front door
15 and somebody breaks in the door, then they have got access to
16 the rest of the house.

17 So the reason why we look at local admin rights is if you
18 want to use an analogy of you're locking every closet door,
19 every hallway door, every cabinet. So you are making it harder
20 for somebody that if they actually break through the first lock
21 it is hard for them to take anything.

22 So that is why we look at this first. We did see
23 improvements in that in 2018.

24 **Q. (BY MR. TYSON)** The second area of risks, the lack of
25 two-factor authentication, the next page on Page 13 that

1 Mr. Cross asked you about, have you seen improvement in the
2 Secretary of State's office on that point?

3 **A.** Yes.

4 **Q.** What kind of improvements have you seen?

5 **A.** They have been implementing two-factor authentication.
6 Again, two-factor authentication is kind of like the bane of
7 most end user's existence. They hate strong passwords, and
8 they hate two-factor authentication. And oftentimes they feel
9 like it is designed to keep them out and let the bad guys in.
10 It is hard for people sometimes to understand and use or they
11 forget to have the right device.

12 But they have done a better job of getting two-factor
13 authentication in place. There is always room for improvement
14 on going from two-factor authentication to actually multifactor
15 authentication. But they have done a good job there.

16 **Q.** And Number 5 on Page 60, Mr. Cross asked you about
17 nonunique local administrator account passwords.

18 **A.** Yeah. I probably blended a little bit of that in my
19 last -- my answer before last. That is where we see this a lot
20 because a lot of times admin accounts you have to actually pay
21 money for the license. And so we do see where more than one
22 person will share a license because they are trying to save
23 money or they are trying to sort of round the clock support
24 setup that access. And that is -- it is considered a no-no.
25 It is like sharing a toothbrush with somebody. You don't do

1 it. Right?

2 So from a good security hygiene perspective, we told them
3 this needed to be fixed. And they have made improvements in
4 that.

5 **Q.** When you are talking about making improvements, is there a
6 reason why these fixes are not administered immediately for
7 some of these identified vulnerabilities?

8 **A.** Sometimes -- I mean, security is complex, and it breaks
9 things when you implement it. It is why a lot of organizations
10 have a hard time keeping up with security patches. You
11 implement the patch. It is hard to test and make sure it is
12 not going to break anything. And nobody wants to have
13 broken-in production. So that is why. This stuff has to be
14 tested. You have to figure out what am I going to break by
15 implementing this new security. And then you have to take into
16 account money resources, who is going to support it. It takes
17 additional resources to support different security tools you
18 put in place.

19 **Q.** And when you say they break things when you add a patch,
20 can you explain a little bit more on what breaking things would
21 mean?

22 **A.** Yes. Sure. So oftentimes a security patch -- you are
23 actually going to change base code of a system, either the
24 hardware, operating system, or the software or how an app works
25 in order to shut down that security vulnerability. And when

1 you do that, sometimes an unintended consequence is you break
2 something else in the system when you do that.

3 So maybe -- for example, I have seen where adding a
4 security patch, something that has been hard coded to expect
5 something to work a certain way in Windows 10 or on a Lennox
6 operating system, you put the security patch in and suddenly
7 that hard coding is no longer there and then it doesn't work.
8 Then you've got a production problem.

9 **Q.** Let's go next to your February 2018 assessment, the review
10 of the PCC. It is titled a vendor cyber risk assessment.

11 Can you tell me a little bit about what vendor cyber risk
12 assessments are?

13 **A.** So one of -- obviously for the Secretary of State of
14 Georgia, they have third-party vendors. And there is always
15 risk with third-party vendors. It can be everything from
16 contractually if they have an issue, when are they going to
17 notify you, what is the service level agreement.

18 And then you are in sort of a trust but verify mode. You
19 don't see them doing the programming work. You have to ask
20 them to do like self-attestations are you secure. You have to
21 trust their answers. So sometimes we get called in by firms to
22 actually do these third-party vendor assessments for them.

23 **Q.** And you identified 15 vulnerabilities in that point?

24 **A.** Uh-huh (affirmative).

25 **Q.** Did the Secretary of State's office take further action

1 after receiving this assessment regarding PCC?

2 **A.** They did. The vendor -- so -- because I talked with the
3 team about this a little bit. The vendor was challenged. We
4 don't really know why. But fairly slow to turn around fixes.
5 And it could be that they just have a lot of complexities.
6 They might have a lot of hard-coded processes that as you are
7 asking them to add in the security fixes it is messing up their
8 hard-coded processes. I'm not really sure.

9 But my team noted that they were probably one of the most
10 difficult kind of situations to get the vendor to turn things
11 around more quickly.

12 THE COURT: And you understood that dealt with the
13 voter registration database?

14 THE WITNESS: Yes.

15 **Q. (BY MR. TYSON)** Was the Secretary of State's office
16 working throughout 2018 on the issues with PCC?

17 **A.** They were.

18 MR. CROSS: Objection, Your Honor. Foundation. I
19 don't know how she could speak to what the Secretary of State
20 was doing throughout the year.

21 MR. TYSON: I'll be happy to ask a foundation
22 question, Your Honor.

23 **A.** They asked --

24 MR. TYSON: Let me ask you a question. Sorry.

25 **Q. (BY MR. TYSON)** Are you aware of actions the Secretary of

1 State's office took after receiving your PCC cyber risk
2 assessment?

3 **A.** They actually asked us to attend meetings with them from
4 time to time. And sometimes the frequency was weekly. And
5 that is pretty typical. Our clients sometimes will get a
6 little tongue-tied on what it is they actually need. And so
7 sometimes they like to have us on there to kind of be the
8 hammer to say this needs to be fixed and here are some ideas on
9 how you might want to fix something like that.

10 **Q.** And there were questions raised earlier about not looking
11 again at PCC. Were there particular decisions made around not
12 doing an additional assessment of PCC that you're aware of?

13 **A.** Not that I'm aware of. But it is not uncommon for
14 customers to say, okay, when we have you in, can you look at
15 something new? Sometimes we get asked to reassess things, and
16 sometimes we get asked, like, I only have this much money and
17 this much time, can you look at something new because I may
18 have vulnerabilities I don't know anything about.

19 **Q.** In the later part of 2018, was there a different kind of
20 assessment that was done for the Secretary of State's office on
21 your November report? Was that a different assessment than the
22 prior ones?

23 **A.** Yes. Because the reason why this one was different was
24 they asked us to do that red team assessment. So the more --
25 very much more technical hands-on with defined rules of

1 engagement.

2 **Q.** That means it was a little more expensive?

3 **A.** It is more expensive and labor intensive both for them and
4 us. But that is typically where we find new vulnerabilities.

5 **Q.** And if you can, go to Page 8 of the November 2018 report.
6 Given your experience in cybersecurity, is it unusual to only
7 have three of ten risks mitigated?

8 **A.** No. A lot of times we get asked to turn this report into
9 a timeline, a roadmap, for them to take to their executives
10 for, like, capital expenditures. And sometimes it is 12
11 months. Some clients it is 36 months because they just know
12 with everything else going on they are not going to get the
13 money or the resources or the priority.

14 **Q.** So on the next page, Page 9, Number 5, 7, and 8 all are
15 listed as underway as the status. What does underway as a
16 status for you in a risk assessment mean?

17 **A.** Underway means they are not just talking about it and
18 thinking about it, they have actually started. They either
19 have meetings, or they are in vendor conversations, or they are
20 in development.

21 And underway actually -- there are guidelines for that
22 within the NIST framework on how to think about something
23 started. Because a lot of people can say, well, we had a
24 meeting, and we talked about it, so we started. That is not
25 legit.

1 Q. When you mention the NIST framework around that
2 categorization, do you have ethical obligations around
3 complying with those NIST requirements and descriptions?

4 A. I do. I mean, so we tell our clients we go where the
5 facts lead us. And we have had from time to time where people
6 will say I need a better score. We're like, okay, well, then
7 you have to do things to get a better score. The facts are the
8 facts.

9 Q. So speaking of scores, if you can go to Page 43 of that
10 report.

11 A. Sure.

12 Q. Let's talk about the score that Mr. Cross asked you about
13 there.

14 Can you explain in some more context what the score
15 measures and what you would expect to see in a government
16 organization regarding a score like this?

17 A. Yes. So this isn't like this is a failing grade to get a
18 50. So it is not like -- it is not like you got 47 percent
19 wrong kind of thing. This is a maturity model.

20 So this is actually the CIS Top 20 controls, which looks
21 at more than just the NIST framework. One of the things that
22 it also accounts for is actually guidelines for protecting
23 critical infrastructure, which election is critical
24 infrastructure.

25 You'll notice too they actually have input and guidance in

1 the CIS Top 20 controls from the election security information
2 sharing and analysis centers, the MS-ISAC. So to us we felt
3 like this was another benchmark we needed to hold them
4 accountable to because of that critical infrastructure.

5 So what that grade means -- you'll notice we graded their
6 policies and whether or not you see the basic implementation,
7 automation, and governance. And each level is worth 20 points.

8 So you'll notice one of their lower scores is around
9 policy. So they have policies complete. They need to do more
10 work on the policies. You'll notice on governance -- that's
11 not uncommon that from a governance perspective that tends to
12 be something you do later. So you do the fixes -- the critical
13 vulnerabilities and fixes. Then you figure out, so how are we
14 going to make sure it stays fixed? Who is responsible for
15 that?

16 You typically do like a governing body that gets together
17 and meets and talks about that. So you'll notice those are
18 areas in the report that say they need improvement. And then
19 when we put them up against the CIS Top 20, which includes the
20 election ISAC critical infrastructure guidelines, that is how
21 we got the score.

22 **Q.** Is this a score that can be compared with other states or
23 other government entities, or is this just a tracking score
24 internally?

25 MR. CROSS: Objection. Foundation, Your Honor. She

1 hasn't done this for other states involving any kind of
2 election system.

3 MR. TYSON: I asked about governments, Your Honor,
4 and I believe she has worked for plenty of governments,
5 including the President.

6 THE COURT: I guess the problem is -- I'm going to
7 allow her to answer. But I don't think it is worth that much
8 in the context of what I -- of what I'm trying to find out. I
9 think it shows functionality. We're not just talking about
10 having a, you know, functional system stripped of thinking
11 about is it producing an election with integrity that is
12 protected in terms of the cast of the vote. That is -- that we
13 don't know anything about right now. But you can go ahead and
14 ask.

15 **Q. (BY MR. TYSON)** So are you able to answer the question?
16 Is this a comparative that can be used as a comparison with
17 other governments, or is it more just an internal tracking
18 score?

19 **A.** It can be used to compare. And part of this is maturity
20 of other entities that use the CIS Top 20. Right. So yes,
21 this is a comparative score. And it is how you rank up against
22 the framework.

23 And if I may give a clarification that maybe I wasn't
24 clear on earlier, we have done work with states and
25 governments. We are not representing another state in a

1 lawsuit around elections. But I also work with DHS on critical
2 infrastructure. Election is one of them.

3 I have also worked with the people who did the
4 coordination for DEF CON's hacking village. So I wasn't in the
5 hacking village but worked with that group, as well as I have
6 been working on my book for two years. So I have been studying
7 it as well. So I just wanted to add that point of
8 clarification.

9 **Q.** Thank you.

10 On the next page on Page 44, second paragraph, you say the
11 GA SOS scored well in the maturity ranking.

12 Does that cover what you just explained to the Court?

13 **A.** It does.

14 **Q.** Ms. Payton, has your opinion of the security environment
15 at the Secretary of State's office gotten better or worse since
16 you were first retained?

17 **A.** Better. I mean, they are -- given the constraints they
18 have, getting taxpayer dollars, you know, the fact that, you
19 know -- one of -- the unemployment rate for cybersecurity
20 professionals is like a war for talent. I mean, it is hard.
21 And so they have done a lot of work with a small mighty team
22 and with the budget they have to work with. But obviously I'm
23 not an easy grader either.

24 **Q.** You mentioned earlier in the discussion about the notes
25 from the interviews of the Secretary of State's staff that they

1 were critical of themselves.

2 Is that a negative thing? Is that a positive thing? How
3 do you see that?

4 **A.** It is very positive. What is interesting is -- so our
5 framework is we say it is non-attributational, we're not going to
6 tell anybody who said what. Obviously that got violated
7 somewhat today. I'm feeling really bad about that. Because we
8 always tell people we keep copious notes but what goes in the
9 report are verbatims without your name. So I feel kind of a
10 duty of care to say that.

11 But one of the things we noticed is my team commented
12 right away, they came prepared, they came with documents, they
13 were candid, they didn't hide stuff, and they were very
14 critical of themselves. Like, we have to do more. We need to
15 do more. We can do better.

16 I have observed a mix of that in some clients where they
17 kind of blame upstairs. There is a little bit of victim
18 mentality. And I have not observed that in the interviews.

19 MR. TYSON: Your Honor, I have one other area of
20 questions that is not included in Ms. Payton's declaration. It
21 is a review that she conducted after the declaration was filed
22 of the DREs and some of the just physical security components.
23 So I wanted to raise that to you and see if that's a line of
24 questioning we could proceed on today. I don't think it will
25 take long.

1 MR. CROSS: I'm sure you know what I'm going to say
2 on that, Your Honor. I mean, they engaged her in 2017. They
3 never asked her to do this until last week. We have no
4 opportunity to even know anything about this to respond. I
5 mean, come on.

6 MR. BROWN: Same objection.

7 THE COURT: I'll sustain the objection.

8 MR. CROSS: Thank you, Your Honor.

9 MR. TYSON: Just one moment.

10 **(There was a brief pause in the proceedings.)**

11 MR. TYSON: I don't have any further questions.

12 Thank you.

13 RE-CROSS-EXAMINATION

14 BY MR. CROSS:

15 **Q.** Ms. Payton, you talked about -- you described how to do
16 the proper cybersecurity assessment.

17 THE COURT: Do you need any water or anything else?

18 THE WITNESS: I'm good. Thank you, Your Honor.

19 THE COURT: Go ahead.

20 **Q. (BY MR. CROSS)** You described how to do a proper
21 cybersecurity assessment. You said it is like a mechanic. You
22 have got to look under the hood, turn the car on, drive it slow
23 and fast.

24 Do you remember saying that?

25 **A.** Yes.

1 Q. You didn't do anything like that for your risk assessments
2 or your declaration with respect to DREs, memory cards,
3 scanners, or GEMS servers; correct?

4 A. That's correct.

5 Q. You talked about how software changes over time and so
6 criminals change their tactics in response; right?

7 A. Correct.

8 Q. You gave the example of Windows 2010, for example, dealing
9 with the vulnerabilities; right?

10 A. Yes.

11 Q. You would agree that criminals don't have to change their
12 tactics if what they are trying to attack is using old
13 software; right?

14 A. That is correct as well.

15 Q. And you didn't look at the current software that is being
16 run on GEMS servers or DREs in the State of Georgia; right?

17 A. That is correct.

18 Q. So you are not aware that their software dates back on the
19 GEMS servers to 2000 -- Windows 2000?

20 A. No. But it is -- there's lots of infrastructure on
21 Windows XP, 2000. I'm -- it is disappointing. But I'm not
22 surprised.

23 Q. You are not offering an opinion in this case that using
24 Windows 2000 in 2019 for elections is a secure and reliable way
25 to --

1 **A.** I wouldn't want to run my stuff on it. But you can get --
2 you can pay for patches. The banks are paying for patches for
3 ATMs.

4 **Q.** You anticipated where I was going.

5 Are you aware that from the evidence we have seen the last
6 patch to the current election system using GEMS and DREs is
7 from -- at least for GEMS, I think, is 2005?

8 **A.** No. I was not aware.

9 **Q.** You did penetration testing in November 2018 that
10 successfully gave your team administrative rights over the
11 Secretary of State's domain; right?

12 **A.** Correct.

13 **Q.** You talked about your Fortune 500 clients today. And I
14 don't want to reopen a door. But since the judge allowed some
15 of that, I just briefly want to touch on it.

16 But just so we are clear, you are not offering an opinion
17 in this case that the same level of security that would be
18 appropriate for, say, a Fortune 500 company dealing with their
19 own private data -- you are not offering an opinion to the
20 Court that that would be appropriate security for managing an
21 election and election data and election equipment; right? That
22 is not an opinion you have offered in this declaration; right?

23 **A.** I have not offered that in the declaration. That is
24 correct.

25 **Q.** The risk assessments you did, that was only for the

1 Secretary of State; right?

2 **A.** And the vendor.

3 **Q.** And the vendor?

4 **A.** Yes.

5 **Q.** You didn't do a similar risk assessment for any of the 159
6 counties in Georgia; right?

7 **A.** That is correct.

8 **Q.** So in looking at the vulnerabilities -- cybersecurity
9 vulnerabilities, you did not assess the degree to which each of
10 the counties, for example, having their own GEMS servers --
11 what vulnerability that might present for the Secretary of
12 State; right?

13 **A.** That's correct.

14 **Q.** Are you aware that county election servers are connected
15 to phone lines using modems? Was that something you knew?

16 **A.** We did not look at that architecture.

17 **Q.** Were you here for Mr. Barnes' testimony?

18 **A.** Part of it, I believe. I came in towards the end of
19 somebody's testimony. I'm sorry if I -- I think it was
20 Mr. Barnes.

21 **Q.** Are you aware that Mr. Barnes testified today and then
22 again in September of last year that he has a USB drive he
23 plugs in to his public-facing computer, which means he is
24 connected to the internet, and then he plugs that same USB
25 drive into what he calls an air-gapped GEMS server? Do you see

1 that?

2 **A.** I did hear about that, and I heard sort of the
3 re-explanation of some of that.

4 **Q.** And you're not offering an opinion here that you would
5 recommend that as a reliable cybersecurity practice for an
6 election management system; right? It is not an opinion you
7 have offered; right?

8 **A.** No, I have not.

9 **Q.** You testified that remediation takes time; right?

10 **A.** Yes.

11 **Q.** But nowhere in your November 2018 assessment did you
12 convey to the Secretary of State that their failure to
13 remediate 19 of the 22 risks you had identified over a year
14 earlier -- that that was perfectly appropriate and consistent
15 with your expectations? That does not appear in that report,
16 does it?

17 **A.** No, it doesn't.

18 **Q.** Nor do you convey to them in that report that their
19 failure to remediate 19 of 22 security risks over the span of a
20 year is consistent with cybersecurity standards; right?

21 **A.** I'm not sure I follow.

22 **Q.** Well, there are cybersecurity standards that you follow --

23 **A.** Yes.

24 **Q.** -- and apply to assess risk?

25 **A.** Yes. They don't tell you a time frame.

1 **Q.** Right. But my only point is: There is nowhere that I can
2 look in your November 30, 2018, report which coincided with an
3 election in the state of 4 million voters, where you conveyed
4 to the Secretary of State that their failure to remediate 19 of
5 22 risks after an election -- that that meets whatever
6 cybersecurity standards you were applying in that time?

7 **A.** I see what you are saying. Yes, we still say it was
8 critical and needed to be fixed.

9 **Q.** You testified that it is common for customers not to ask
10 for assessment on certain aspects of a network or a system;
11 right? Yes?

12 **A.** Yes.

13 **Q.** Thank you. And, here, just so we have the facts right,
14 you did two prior assessments before November of 2018 on PCC on
15 the registration database; right?

16 **A.** We did one for the vendor and one for the Secretary of
17 State of Georgia.

18 **Q.** And in February of 2018, you found 15 risks; right?

19 **A.** Yes.

20 **Q.** And so then when we get to the November 30 assessment that
21 coincided with the midterm election; right?

22 **A.** Yes.

23 **Q.** So you are not offering an opinion in this case that it
24 was appropriate in your mind for the Secretary of State to
25 remove from the scope of your work PCC and the voter

1 registration database that you had analyzed multiple times
2 before, identified over a dozen risks -- you are not telling
3 the Court that it was appropriate for them to remove that from
4 the scope of your work for the first time coinciding with a
5 midterm election in November of 2018; right?

6 **A.** I'm not sure I follow. You mean, I didn't cover that in
7 my declaration or --

8 **Q.** That is not an opinion that you offer anywhere in your
9 declaration? That it was appropriate for them to tell you
10 coinciding --

11 **A.** Yeah. I didn't say it was appropriate.

12 **Q.** Lastly, you mentioned that you have done work with DHS on
13 critical infrastructure; right?

14 **A.** Yes.

15 **Q.** You said critical infrastructure includes elections;
16 right?

17 **A.** Yes.

18 **Q.** So even though you have that experience, we're just clear
19 the Secretary of State not for any of the assessments you did
20 in 2017 or 2018 or for the purpose of your declaration -- not
21 once did they ask you or engage you to do a risk assessment of
22 the election piece of their infrastructure meaning GEMS, memory
23 cards, DREs; right?

24 **A.** Correct.

25 MR. CROSS: Thank you.

REDIRECT EXAMINATION

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BY MR. TYSON:

Q. Just briefly on a couple of points since Mr. Cross has asked about the GEMS servers and the software on them.

Ms. Payton, Mr. Cross asked you a question about running Windows 2000 on a GEMS server.

Do you recall that question?

A. I do.

Q. And do you know enough information by just knowing the operating system alone to determine the security of a system?

A. Yes and no. The operating system, if it is an older operating system, one of the things I tend to look for is what are the mitigating controls around that old system.

So, for example, the diarist at the White House used something ancient that was a very, very old operating system, no patches available. And when I tried to talk to the Chief of Staff about it, he said, if the diarist doesn't want to move, just figure out how to secure it. So I had come up with mitigating controls around this ancient system to make sure that the President's diary was protected and safeguarded.

So typically those older operating systems, it is not -- for whatever reason, a vendor has a hard time moving. Like most of banking ATMs are on Windows XP. Because of that, you can either buy more patches or do your own mitigating controls.

But we always recommend to clients the sooner you can get

1 off of old operating systems the better. But we understand the
 2 reality that sometimes they can't.

3 **Q.** And what are mitigating controls that you would recommend
 4 in that kind of scenario?

5 **A.** You can put technology around it. So what you can do is
 6 put a more modern -- I call it like a wrapper. So you can take
 7 this old ancient technology and put around it more modern
 8 technology that will detect the threats that are coming at it.
 9 You can also do things like not have --

10 THE COURT: All right. Do you know that any of that
 11 was done?

12 THE WITNESS: I don't know.

13 THE COURT: All right. I think it is theoretical
 14 unless I know it was actually done.

15 MR. TYSON: And, Your Honor, my only question on that
 16 was is physical security a thing you can do as well.

17 THE WITNESS: Yes. Physical security is oftentimes
 18 the best solution.

19 THE COURT: But you understand we're dealing with 159
 20 counties that are also communicating with the Secretary of
 21 State's office and lots of other entities and also potentially
 22 voters who are accessing their information system.

23 Did you look at any of that?

24 THE WITNESS: No.

25 THE COURT: Okay.

1 MR. TYSON: I don't have anything else, Your Honor.

2 THE COURT: Okay.

3 MR. CROSS: No further questions.

4 MR. BROWN: No questions.

5 THE COURT: Mr. Brown, did you have any?

6 MR. BROWN: No, Your Honor.

7 THE COURT: All right. I would -- so that I don't
8 end up calling somebody back later on, I'm going to take a
9 break and look at my notes so I won't do to you what I did
10 before.

11 So we're going to take about a five-minute break. I
12 guess you should be prepared to address for me at that juncture
13 how you want to proceed.

14 MR. CROSS: I was going to say, Your Honor, our next
15 witness was going to be Dr. Shamos. We have a video that we
16 were going to play. So we can do that after the break if that
17 works.

18 THE COURT: All right. Well, I think we should go
19 over what the hours are and what you think is left also. I
20 mean, I'm perfectly willing to keep on going. And I have to
21 figure out exactly how long -- I have an interrupting hearing
22 tomorrow at 10:00. So I need to figure out -- I'm going to go
23 back and figure out how long that is going to take. I guess it
24 is going to be a robust five minutes.

25 MR. CROSS: I will say the nice thing about the video

1 is it is entirely predictable. And I think it is roughly a
2 little over 25 minutes.

3 THE COURT: We can do that no matter what. I'm not
4 saying we won't do that. I'm just trying to figure out what
5 else is left.

6 MR. CROSS: That one we know how long it is going to
7 be. Thank you, Your Honor.

8 COURTROOM SECURITY OFFICER: All rise.

9 **(A brief break was taken at 5:33 P.M.)**

10 THE COURT: Please have a seat. Do we have
11 Ms. Payton still here?

12 EXAMINATION

13 BY THE COURT:

14 **Q.** In the November 2018 report that Fortalice produced, you
15 indicated or Fortalice indicated that it -- that it had
16 concluded the active testing phase of the external assessment
17 of looking for a breach during the limited time allowed for
18 external testing. And it hadn't found -- been able to breach
19 in that time period.

20 And then you said it should be noted that an external
21 hacker would not necessarily have a specific time limitation on
22 external activities, properly noted.

23 So what was the limited time frame that you allocated?

24 **A.** I'm not sure -- I have to look at our rules of engagement
25 to know. I'm kind of looking out there to see if they -- I

1 can't remember exactly how many days they gave us. But I think
2 in order to manage their time and money, they -- sometimes
3 clients put a limit. So they are like you only have X amount
4 of days to try to access; and when you run out of that, you
5 need to stop.

6 **Q.** So you don't really have any idea?

7 **A.** I don't remember. I apologize.

8 **Q.** All right.

9 **A.** I don't remember how long they gave us. But they did put
10 a limitation on it, which is why you see us commenting on that
11 in here.

12 **Q.** So because it was limited and in that time frame you
13 hadn't breached, you then assumed the breach and looked at the
14 question of what you could find -- what you would be able to
15 access in the event that you had gotten your foot in the door
16 at all?

17 **A.** Correct.

18 **Q.** I guess that is why it says establish a foothold.

19 **A.** Yes.

20 **Q.** And then you started doing different types of attacks in
21 order to find that and find vulnerabilities; is that right?

22 **A.** Yes.

23 **Q.** And you were able ultimately to download encrypted
24 passwords and infiltrate the network and ultimately, as I
25 understand it, control the domain -- the domain and that meant

1 control the administrative domain?

2 **A.** Yes. The one thing -- and I forget which page it is on.
3 But the one thing that we did notice was because they had
4 implemented a platform called Dell SecureWorks, once we started
5 to try and actually activate our access, Dell SecureWorks
6 actually saw we were there and triggered an alert. And that is
7 somewhere in here.

8 **Q.** I saw that. But you still ultimately got to the point
9 that you were able to --

10 **A.** Yes.

11 **Q.** -- obtain full control of the administrative domain?

12 **A.** Yes.

13 **Q.** And I just wanted to make sure I understood what that
14 meant.

15 So that would allow -- if you had been a real hacker, you
16 would have been able to go through other -- gain access to
17 other systems because you had the administrative domain?

18 **A.** Potentially. Uh-huh (affirmative).

19 **Q.** Okay.

20 **A.** I'm sorry. I was just going to say again it would depend
21 on how they decided to move. Because if they took sort of the
22 move action that we did, it is possible Dell SecureWorks would
23 have shut them down.

24 **Q.** So I'm really still trying to understand actually the
25 scope of the system that you looked at. I know you didn't

1 actually look -- do this type of testing for the voter
2 registration programs or data system, which has been another
3 part of this case.

4 And I gather from the testimony you didn't look at the
5 connection with the -- the counties?

6 **A.** The dial-up access?

7 **Q.** The dialogue that they were having with 159 basically
8 registrars' offices that are funneling data back and forth;
9 right?

10 **A.** Right.

11 **Q.** And did you specifically ever look at an attempt to breach
12 the Center for Elections security? I guess -- I think that is
13 the name -- is that what the name CES stands for?

14 Mr. Barnes -- did you specifically ever try to do that?

15 **A.** No.

16 **Q.** So what was it that you were actually attempting to
17 penetrate and ping at and test at and gain control over?

18 **A.** Yeah. We were looking for what we would call sort of that
19 master access and making sure it is shut down. That master
20 access could be something that could be that foothold in the
21 door to get to election systems or it could be to get to the
22 Secretary of State of Georgia's other non-kind of
23 election-facing systems.

24 **Q.** The corporate information?

25 **A.** Yes.

1 **Q.** And all the things?

2 **A.** Employee information. Yes. Operational information.

3 So for us, that area has to be secure. And yes. Did we
4 not look at the other points? We didn't. But we were looking
5 at sort of like -- almost like you would look at like the
6 perimeter. So the outskirts of the kingdom versus a specific
7 vault within a castle, if that makes some sense.

8 **Q.** No. That is a good analogy.

9 So you're testing the outer -- the outer walls and --

10 **A.** Yes.

11 **Q.** But it was outside your scope to really focus in on the
12 particular issues affecting the management of the elections and
13 that data --

14 **A.** Yes.

15 **Q.** -- or whatever vulnerabilities might be triggered by the
16 fact that it has got so many -- they have to interface in so
17 many ways?

18 **A.** Correct.

19 **Q.** And you didn't analyze that either as that whole
20 interface?

21 **A.** What we were looking for was could anything under the
22 Secretary of State of Georgia purview -- any of the
23 different -- the back office operations in addition to the
24 things that they are responsible for, could we from outside,
25 you know -- kind of using the kingdom analogy, could we get

1 into the castle? Yes, we can get into the castle. Could we
2 move around the castle fairly freely? And in some cases the
3 answer was yes.

4 But we didn't actually red team the election security
5 hardware and software itself. Yeah.

6 **Q.** Or the data system --

7 **A.** Right.

8 **Q.** -- in terms of just the security of the data system?

9 **A.** Correct.

10 **Q.** Okay.

11 **A.** With the exception of the vendor who does the
12 registration.

13 **Q.** The registration. But you only had limited access there?

14 **A.** Yes, ma'am. That is correct, Your Honor.

15 **Q.** That's all right. Lots of people call me ma'am here.

16 You did find that Fortalice was able to identify instances
17 of voter registration data hosted on file shares accessible to
18 all domain users?

19 **A.** Yes.

20 **Q.** And then you recommended that there be follow-up about
21 that?

22 **A.** Yes.

23 **Q.** So where was -- and you had a picture here of the absentee
24 voter report. I don't know whether that was in connection --
25 this is Page 19 of your report.

1 Did you see absentee voter information? Is that --

2 **A.** Yes. And what I see here -- what we're saying is we
3 didn't check to see if this was redacted or complete. So was
4 it old? Was it redacted? Or was it complete? But we did find
5 it.

6 **Q.** And you found this in -- just simply as you were
7 penetrating the wall, you found -- somehow it came up?

8 **A.** Yes. So one of the things we look for is do you have
9 visibility into all of the different data stores. Because a
10 lot of time people focus on once you get inside the walls, if
11 you have got unauthorized access -- maybe they don't go after
12 the official database of record. They start to look for is
13 there data sprinkled other places within the enterprise. And
14 that was one of the things we were looking for is did you lose
15 line of sight to data. Did somebody copy data?

16 Maybe they were trying to have a test data set to test
17 something and they forgot they left it there. Did they not
18 follow a process? That is also fairly common. Maybe they were
19 testing out something new, created this data set outside of a
20 process, and forgot about it.

21 **Q.** But if I understand the principles of cybersecurity and
22 hacking -- and, of course, this is not the only place I ever
23 deal with hacking in this court and cases involving hacking --
24 what the hacker tries to do is get basically some access? It
25 might be at some major company just through the HVAC system and

1 then they go from there?

2 **A.** Yes, that is correct. That is what we were looking for
3 and trying to replicate.

4 **Q.** And when you were evaluating what you said was the
5 progress they have made, you were really evaluating progress
6 that the Secretary of State's office as a whole made, not
7 necessarily relating to election security; right?

8 **A.** Correct.

9 **Q.** When Fortalice came in, was it aware that there had been
10 this major -- this alleged major breach, which I think it
11 wasn't just alleged, involving the Kennesaw data and that the
12 state had only recently taken over the data system -- the voter
13 data system?

14 **A.** They had -- when we got engaged, we were made aware of
15 that situation. We always ask are there incidents we should be
16 aware of that were fairly recent.

17 **Q.** And you are still consulting with the state?

18 **A.** Yes, as needed on projects.

19 **Q.** And do you have any knowledge of what is going on with
20 respect to the voter registration data that was being handled
21 by -- I'm sorry -- the acronyms have gotten the better of me at
22 this hour -- by the vendor PCC -- yeah.

23 **A.** The PCC vendor?

24 **Q.** PCC. Right. Have you any involvement with that?

25 **A.** Not currently.

1 Q. You don't know what is going on there?

2 A. No.

3 Q. When you did the assessment of PCC in the winter of 2018,
4 that was done by Cloud -- and other things also were a
5 combination of Cloudburst Security and Fortalice Solutions.

6 Is Cloudburst Security a different company than you and
7 you just partner up?

8 A. It is. So they had a contract vehicle that made it -- so
9 they were a prime. But they were really a pass-through prime.
10 So they had a contract vehicle that made it easy for the
11 Secretary of State Georgia to get to us.

12 Q. I just want to make sure I understand your finding in that
13 report from February of 2018 was that the Number 1 ranked risk
14 was that the software applications of PCC are externally facing
15 and that meant facing the public?

16 A. Yes.

17 Q. So that they present a much higher risk of being violated;
18 is that right?

19 A. Yes. The way we look at it is: That kind of the more
20 points of presence you have to the outside world, that is
21 another potential window or door that they can break in.

22 Q. Would some version of that principle be applicable when
23 you are talking about the election system having to connect
24 with personnel in 159 different counties?

25 A. It can be. So one of the -- one of the things when you

1 allow kind of that remote piece where you have got many
2 different implementations is you would want to have people,
3 process, and technology.

4 So you would want to make sure you have very solid
5 operational security, physical security. Something we had to
6 do at the White House with our equipment. Our equipment went
7 everywhere. And so we had a whole like set of proper
8 procedures that we followed around that equipment before it
9 even got plugged in or turned on.

10 So you would want to make sure you had that. You want to
11 make sure everybody is trained up. User security awareness
12 training. I know the DHS has made the round to the state on
13 that.

14 Then you would have your cybersecurity points. And to me,
15 cybersecurity without the people and process is -- it is
16 just -- you know, just a couple of tools. And it may or may
17 not stop things. You have got to have all three.

18 THE COURT: All right. Thank you very much.

19 Are there any other questions occasioned by mine?

20 MR. CROSS: Your Honor, could I clarify a couple of
21 very quick things very briefly?

22 THE COURT: Yes. The time I spent would not be
23 attributed to anyone.

24 RE-CROSS-EXAMINATION (Further)

25 BY MR. CROSS:

1 Q. Thank you. Very briefly, Ms. Payton. You mentioned you
2 tested using the analogy of an outer wall or a castle; is that
3 right? Yes?

4 A. Yes.

5 Q. I'm sorry. You have to answer out loud.

6 A. Sorry.

7 Q. But I just want to make clear: You are not suggesting to
8 the Court that by assessing that perimeter, that outer wall,
9 that that included testing all points of access or
10 vulnerability to the GEMS servers; right?

11 A. That is correct. Yes.

12 Q. Last point, the Court asked some questions of you with
13 respect to the KSU breach. And I think just to be clear you
14 didn't do any assessment of the KSU breach; is that right?

15 A. Right.

16 Q. Does your firm have the capabilities to evaluate a breach
17 like that in terms of what the impact was, how it occurred,
18 whether there has been any compromise in the system as a
19 result?

20 A. We do incident response.

21 MR. TYSON: I object to the lack of foundation as to
22 what the KSU breach is. I think we need to establish that.

23 THE COURT: I think I did. She said she had been
24 briefed about it when she came on.

25 A. Yeah. They told us -- we always ask if something -- what

1 bad things have happened so that we know. And we are looking
2 for could it happen again.

3 **Q. (BY MR. CROSS)** So we're clear, we're talking about the
4 breach that Logan Lamb identified over a six-month period in, I
5 think it was, maybe 2016 or 2017. Do you remember this? You
6 understand that is what we're talking about; right?

7 **A.** I believe so, yes.

8 **Q.** But my question is just simply: Your firm has the
9 capabilities to examine a breach like that and look at how it
10 occurred and the extent of the vulnerabilities and whether the
11 system is compromised as a result; right?

12 **A.** Yes.

13 **Q.** The Secretary of State did not engage you to do that;
14 correct?

15 **A.** No.

16 **Q.** Thank you.

17 REDIRECT EXAMINATION (Further)

18 BY MR. TYSON:

19 **Q.** Also just very briefly, Ms. Payton. The Judge asked you
20 about Page 19 of your report and voter registration data that
21 was accessible to users.

22 **A.** Yes.

23 **Q.** Do you know whether documents regarding absentee voters,
24 Excel spreadsheets are public documents or not?

25 **A.** I don't. I don't know for sure.

1 **Q.** You talked about the perimeter defense versus the kind of
2 vaults within that. Were you assigned to go and try to get to
3 those vaults, or is it -- the process you describe you are
4 beginning and trying to work the defenses from the outer
5 perimeter? Can you explain a little bit more about that?

6 **A.** Sure. Absolutely. You typically are given rules of
7 engagement. So our rules of engagement were can you break in.
8 And we already walked through that.

9 And then what types of activity can you do once you break
10 in. We weren't told to look specifically at GEMS or at that.
11 So we did sort of the typical looking around, what things can
12 we access. Right? What doors are unlocked? What could we do
13 with it? What kind of data is sitting sort of open to other
14 users that maybe it shouldn't be? And so that is where the
15 focus was for that particular assessment.

16 **Q.** And you were asked about the PCC system being public
17 facing. Are you aware of -- well, for the public-facing side,
18 are there systems or are there things you are aware about that
19 voter registration system that would require it to be public
20 facing?

21 **A.** Well, in some states, they have it public facing because
22 they allow you to.

23 MR. CROSS: Objection, Your Honor. Relevance.
24 Unless she can tie it to Georgia, what other states do doesn't
25 tell us anything about the requirement here.

1 **A.** Checking voter registrations and where you are registered
2 to vote is oftentimes the reason why there is an
3 external-facing component.

4 THE COURT: That is fine.

5 **Q.** **(BY MR. TYSON)** The last question, Ms. Payton, I know you
6 said you don't disclose clients. But have you ever been hired
7 by Kennesaw State University?

8 **A.** No.

9 MR. TYSON: Thank you.

10 THE COURT: May this witness be excused?

11 MR. BROWN: No questions.

12 MR. CROSS: Nothing more, Your Honor. Nothing more.

13 Thank you.

14 THE COURT: Thank you very much.

15 MR. CROSS: Thank you, Ms. Payton.

16 If Your Honor is up for it, we can play Dr. Shamos.

17 MR. RUSSO: Your Honor, I was going to actually segue
18 right into that. The state defendants -- we never received the
19 designations of Dr. Shamos' video testimony to put up our own
20 video today. We could do that, of course, in our case in chief
21 tomorrow, which is -- that would be fine.

22 THE COURT: That is fine.

23 MR. RUSSO: Additionally --

24 THE COURT: I mean, it would be obviously better to
25 do the whole thing at once. But people might all fall asleep

1 as it is. So 25 minutes might be as much as anyone can stand.

2 MR. RUSSO: We can do them all tomorrow if they
3 wanted to give us --

4 THE COURT: I'm afraid you're going to run out of
5 time. I'm trying to think about as it is when we will begin.
6 I know I have a hearing at 10:30 that will last about, I'm
7 told, half an hour approximately.

8 But I'm trying to figure out how early we need to
9 begin. I felt like we should get through with the beginning
10 here. And then if it makes more sense later on right away to
11 show the rest of his tomorrow morning, we can do that too.

12 MR. RUSSO: Okay. And additionally, Your Honor, the
13 IT -- Court's IT staff has let us know that they have set up
14 his Skype availability for 11:30 tomorrow.

15 THE COURT: But we have told them also we don't know
16 that we're going to be really ready or that we're going to do
17 it.

18 So I mean, I basically thought the way I was -- I
19 don't know when Dr. Halderman is going to testify. But I
20 thought my ruling was sort of tied to what he was going to say.
21 Maybe it is fine also.

22 I don't know whether -- I think he's the only of your
23 tech experts -- well, you have Mr. Bernhard too. Would his
24 testimony be relevant to be potentially --

25 MR. BROWN: To Dr. Shamos?

1 THE COURT: Yes.

2 MR. BROWN: I think Dr. Halderman would be the most.

3 THE COURT: Because I think I have to make an
4 assessment. I don't know. Maybe there is something brand-new
5 he is going to say. If it is not, then we probably won't hear
6 from Dr. Shamos and you can designate his testimony and I can
7 also read parts of his testimony.

8 I mean, I'm happy to listen to parts of it. But if
9 it ends up being more -- so substantial, then I would rather
10 read it. And I think you know me well enough that I will read
11 it.

12 MR. RUSSO: Yeah. I think, of course, the issues --
13 I don't know what time we're starting tomorrow. 11:01?

14 THE COURT: No. I think we should start earlier so
15 that we are sure that we are through. But --

16 MR. BROWN: Earlier and then break for your hearing?

17 THE COURT: That is right. I think we should get at
18 minimum an hour in.

19 MR. RUSSO: I guess my concern is we run into that
20 11:30 time frame. I don't know what time --

21 THE COURT: I know. But that is -- and it seemed
22 difficult to make it by 11:30 is what I'm saying here even if
23 you wait to show Shamos' testimony because you want to get to
24 him. You still -- is Dr. Halderman your next witness or not?

25 MR. CROSS: No, he was not. Because he needs to

1 really follow Mr. Finley.

2 THE COURT: Mr. Finley?

3 MR. CROSS: Yes. So --

4 THE COURT: What is the subject of Mr. Finley's
5 testimony? I'm sorry.

6 MR. CROSS: He principally is going to talk about
7 feasibility. But Dr. Halderman has some pieces with respect to
8 at least the electronic portion of that. And so we wanted to
9 do Mr. Finley and then Dr. Halderman.

10 I will tell you, Your Honor -- I mean, obviously they
11 will confirm this themselves during the hearing. There is
12 nothing -- there is nothing we expect Dr. Halderman to testify
13 to that is not within the scope of his declaration, other than
14 responding perhaps to things he has heard today in the
15 courtroom. Even that would be discrete points. And so there
16 is no new analysis. There is nothing like that.

17 THE COURT: Well, it doesn't seem, frankly, that
18 we're going to be ready for rebuttal to the extent he is
19 testifying on rebuttal at 11:30. That is where he is at six
20 hours later; right? Or five hours later?

21 MR. CROSS: I don't think we know where he is.

22 MR. RUSSO: He is in Wyoming.

23 THE COURT: He is in Wyoming. I thought it was --

24 MR. RUSSO: It is close to being in a house out in
25 the country.

1 THE COURT: All right. Well, I'm sure that he
2 desires just to be enjoying the mountains. So I would rather
3 let him know that it -- that 11:30 doesn't seem realistic at
4 this point. But I don't know what his -- his contact is. I
5 mean, if it happens, it is not -- I hate to have him in the
6 last part of his vacation jacked around.

7 MR. RUSSO: I have -- I mean, one proposal might
8 be -- and I don't know if this would be amenable. But if they
9 could put up Finley tonight and they could give us the
10 designations for their Shamos' video, we could then do the
11 counter-designations -- we could put that off until tomorrow.
12 And then Halderman would be the first one in the morning to go.
13 And that way if there was time and there was a need for
14 Dr. Shamos, that would fit within the schedule with the Court's
15 IT.

16 MR. CROSS: The challenge, Your Honor, is two-fold.
17 One, this keeps happening. We had an agreement. They asked
18 about designations. My response -- I think this is a week
19 ago -- was we'll just do our video, you create your video,
20 we'll play ours, and you play yours. Because it was just -- no
21 one was going to be able to figure out these until -- I mean,
22 we were literally finishing this last night. It is frustrating
23 to keep running into this problem because we had an agreement
24 on it.

25 The other problem is no matter how you configure

1 things you're not going to get Dr. Halderman on the stand
2 before 11:30. We're just moving pieces around.

3 THE COURT: All right. I think you just need -- I
4 don't know what is going to happen, whether he is necessary.
5 If you would -- you are going to have plenty of time to reach
6 him. If he is still in Wyoming, that is two hours' difference
7 earlier.

8 So it is more that -- is the Skype from his home --
9 or it is not a Skype. Is the connection from his being at his
10 house or someplace else? Does anyone know?

11 MR. RUSSO: I think it is someplace else. He lives
12 in Pittsburgh.

13 THE COURT: Well, I know that. But he lives --

14 MR. RUSSO: He doesn't have a second house that I'm
15 aware of.

16 THE COURT: No. But -- all right. Let's just go
17 ahead and deal with the Shamos -- showing it now. I'm just
18 trying to deal with what we can -- I don't know whether Mark
19 has indicated where the connection was going to be.

20 COURTROOM DEPUTY CLERK: It is from where Mr. --
21 Dr. Shamos is.

22 THE COURT: Where he is living? Where he is staying
23 right now?

24 COURTROOM DEPUTY CLERK: Where he is staying.

25 THE COURT: I don't think we will have a problem. It

1 is not like he is having to go to some office and get there.

2 MR. RUSSO: I understand.

3 THE COURT: And so let's just proceed. And then
4 please indicate though as you proceed where you are beginning
5 so they can at least follow along.

6 MR. CROSS: We actually -- I have a hard copy that we
7 can give them. But why don't we go ahead and start, and I can
8 hand that to them.

9 So obviously our next witness, Your Honor, is
10 Dr. Michael Shamos.

11 THE COURT: Do you want this in the transcript? Are
12 you jumping around? Because if you are jumping around, I'm
13 going to ask --

14 MR. CROSS: It goes -- it is excerpts. But it goes
15 in order through the transcript. And, again, we have a hard
16 copy. And so I can provide that. We can even put that into
17 the record.

18 THE COURT: Well, let's put that into the record.
19 Because last time I was trying to find things in one of these
20 and I couldn't find it. It will be easier than having the
21 court reporter at this last moment try to follow it.

22 MR. CROSS: We'll find it.

23 THE COURT: Then if the defendant would also do the
24 same. Provide me with a copy of the pages that you plan to
25 introduce. And we'll make it part of the record, not just

1 having it for my benefit. But we'll actually have it --

2 MR. CROSS: Yes, Your Honor. Why don't we start and
3 then I'll find -- there it is. Yes.

4 Ready?

5 THE COURT: Ready.

6 **(The videotaped deposition of MICHAEL SHAMOS,**
7 **Ph.D., was played for the Court.)**

8 THE COURT: Are you going to -- do you have a copy
9 now, or are you going to introduce it tomorrow?

10 MR. CROSS: My only copy is the one I gave Mr. Russo.
11 So we'll bring it tomorrow.

12 THE COURT: That is fine. Be sure to bring us an
13 extra copy too, besides whatever you are introducing into the
14 record.

15 So we're going to end today. And as courtesy to the
16 audience, we have some housekeeping. You are welcome to leave.
17 I'll give you a minute if you are wanting to leave now. It
18 will be disruptive if you leave before -- otherwise, you have
19 got to wait for a few minutes. Sort of like leave now or
20 forever hold your peace until we are through in a few minutes.

21 All right. So tell me what witnesses you are
22 producing tomorrow.

23 MR. CROSS: For the Curling plaintiffs, it is Alex
24 Halderman and Lowell Finley. And I think those are the only
25 two remaining witnesses for us, Your Honor.

1 THE COURT: Where are you on your time, according to
2 your folks?

3 MR. CROSS: 208 minutes. We were thinking roughly
4 300 or 330, if it was five to five and a half hours.

5 MR. BROWN: Then Coalition plaintiffs have Matt
6 Bernhard and Virginia Martin for about 40 minutes.

7 THE COURT: Well, have you allocated time for
8 yourself to cross-examine their folks --

9 MR. BROWN: Yes.

10 THE COURT: -- in that? And you are expecting -- so
11 you want to have Mr. Finley and then you want to have --

12 MR. BROWN: It will probably be Finley, Martin,
13 Halderman.

14 THE COURT: I'm sorry?

15 MR. BROWN: Martin, Finley, Halderman.

16 THE COURT: I didn't get the first one because now
17 you are including a third person.

18 MR. BROWN: There's four witnesses that the
19 plaintiffs collectively have left.

20 THE COURT: All right.

21 MR. BROWN: And that is Martin, Finley, Halderman,
22 and Bernhard and probably in that sequence. Not all the same
23 length. Halderman will be a little bit longer than the other
24 ones.

25 THE COURT: You had him originally down for an hour.

1 I assume you are --

2 MR. CROSS: We have truncated all of these over the
3 course of -- in our prep and again as we prepare for tomorrow,
4 yes, Your Honor.

5 THE COURT: All right. And --

6 **(There was a brief pause in the proceedings.)**

7 MR. CROSS: 208 minutes.

8 THE COURT: What did you think? Does anyone have
9 what the --

10 MR. RUSSO: We had an hour and 37 minutes remaining
11 for plaintiffs.

12 MS. CHAPPLE: We said we had 208 total so far. Not
13 remaining.

14 **(There was a brief pause in the proceedings.)**

15 THE COURT: You have an hour and 37 minutes. Hour
16 and 37 minutes left is what you have? Is that what you are
17 saying? I'm sorry.

18 MR. CROSS: Oh, I'm sorry.

19 THE COURT: I'm just trying -- you are saying that
20 you-all have an hour and 37 minutes including time that you
21 might need for cross-examination of any of their witnesses?

22 MR. CROSS: Yes.

23 THE COURT: You better fly.

24 MR. CROSS: They only have four witnesses, Your
25 Honor.

1 MR. RUSSO: We have three hours. By our count, we
2 have three full hours left for state defendants then.

3 THE COURT: Who do you have?

4 MR. RUSSO: We have three elections directors. I
5 guess four also with Mr. Barron. And then Dr. Shamos' video.

6 THE COURT: Do you have any thought of how long you
7 are going to be using Dr. Shamos' video?

8 MR. RUSSO: Not yet, Your Honor.

9 THE COURT: All right. Well, I wish I could tell you
10 more about Dr. Shamos. I haven't heard -- you know, here is
11 the thing. It is that -- you know, as the court discussed in
12 *Flame vs. Industrial Carriers*, Norfolk Division of the Eastern
13 District of Virginia, in 2014, one big factor still is it is
14 better to see the person -- the witness in person.

15 But here it is more than that. The state had
16 Dr. Shamos on retainer for some amount of time. We knew this
17 case was moving forward. And he explicitly stated with respect
18 to renewing his engagement with the state that if it was the
19 last week of July, which that is where we are at, he wasn't
20 available. And the state decided it nevertheless wanted to
21 keep him as a witness. And that is your choice.

22 And, you know, I stick by what I said earlier. If
23 there is something new that arises in Dr. Halderman's testimony
24 that requires rebuttal that was not addressed already that you
25 can't bring to my attention in his relatively lengthy

1 declaration, which you are welcome to do or in the -- in the
2 testimony itself, I'll certainly consider it.

3 But I know it is inconvenient for him. But this is
4 sort of where we're at. And, you know, I think he's a
5 sophisticated witness from my observation. And he also went --
6 did go in great detail in analyzing each of the experts and
7 talking about their testimony and other people too and opined
8 on many other things as well. So it is not like he confined
9 his opinions in any way.

10 So it just would have to be something that really
11 jumped out. And I don't think it will take much time if that
12 is so.

13 MR. RUSSO: Your Honor -- oh, I'm sorry.

14 THE COURT: But, anyway, that is my view. And I -- I
15 sort of dealt with this in a truncated way in the beginning
16 just to let you know where I was at.

17 But his engagement letter was on June 24th. But I
18 think that you-all decided to proceed. And I just -- while it
19 is true that people of -- that election security experts -- but
20 he may be -- he is not really a forensic examiner in this
21 context. He has -- but this sort of topic are not a dime a
22 dozen. But, in fact, much to my education through the course
23 of this case, there are, in fact, a significant number of
24 people in this field and there are a lot of election centers in
25 all of these different -- and IT programs in law school.

1 So, anyway, that is where we're at. I don't want to
2 deprive you of something unfairly. But I also feel like I have
3 an ample record. And now that I'm being told that there is not
4 any bombshells about to go off, I'm more confident than ever.
5 But, you know, we'll see.

6 MR. CROSS: Your Honor, could I ask one entirely
7 selfish motivated question?

8 THE COURT: Yes.

9 MR. CROSS: Last year, Your Honor decided not to do
10 closings. You felt like you didn't need it. I had what was
11 the most amazing and dazzling closing prepared for you that I
12 did not go to bed for.

13 THE COURT: I'm so sorry.

14 MR. CROSS: And I think it would have changed the
15 outcome of the case. I'm convinced of that. But apart from
16 that, Your Honor, do you have an instinct -- because it will
17 help us know whether we should be preparing something like
18 that.

19 THE COURT: Well, to some extent, we're dealing with
20 time. You know, I will allow you to do something. But it
21 is -- but whether we're going to be able to have closing
22 arguments that go on for any length of time, i.e., 30 or 40
23 minutes apiece versus 20 minutes -- 15 or 20 minutes is
24 something else.

25 I mean, I -- here is my concern. It may be that I

1 have more questions than anything else, like everyone else who
2 is in this position. I know it is a difficult case. There
3 might still be factual issues I'm not clear about or
4 evidentiary issues.

5 And yes, I have to go on the record. But if it is
6 really important, I don't desire just to be struggling with it
7 if I could actually address it. You know, I'm kind of the fact
8 queen. So I like to know. And that is why I end up asking
9 questions of the people who are experts also and anyone else if
10 I don't understand something and drag poor Mr. Barnes back
11 here. So --

12 MR. CROSS: That was my --

13 THE COURT: You could plan. But let me just say, if
14 we get to 6:00, it is going to be hard to keep everyone's
15 attention here.

16 MR. CROSS: What you had outlined is kind of what I
17 was thinking. That instead of having a big prepared thing,
18 we'll be available to answer questions and maybe just hit the
19 highlighted facts for you in some truncated way.

20 THE COURT: You know, I might have some questions
21 about -- to the extent we're dealing with relief issues, which
22 I understand that is a big focus for the -- as always of the
23 state and Fulton County, I think that that -- that is a real
24 issue.

25 And one of the things that clearly I will just say in

1 terms of where -- my wonderings is I don't -- I'm still very --
2 I still have worries about the voter -- the integrity of the
3 voter data system. That has not been the first and foremost
4 focus of the system. But, you know, that has been a focus of
5 my -- what I have addressed.

6 And it is something that is actually clearly within
7 the state's control. So it might be helpful to -- for me to
8 understand that better.

9 We have an issue that the state wanted to talk about
10 later on. I would like counsel just to stick around so I can
11 ask about that as well today.

12 MR. CROSS: Thank you, Your Honor.

13 THE COURT: Is there anything else?

14 MR. CROSS: When you say stick around, you want us to
15 stick around?

16 THE COURT: Because if you do closing argument, then
17 you surely will want to be leaving. And I will too.

18 MR. RUSSO: That is fine with us.

19 MR. CROSS: We'll stick around.

20 THE COURT: All right. I would just like counsel
21 alone to stick around though for now. I mean, anyone else can
22 stay out in the hall a little bit.

23 MR. CROSS: You said tomorrow you wanted to get in an
24 hour early. Do you want to start out --

25 THE COURT: I think we need to start -- so that you

1 could have that opportunity, I think we need to start at 9:30.
2 We'll go for an hour. I have a -- the reason I can't move the
3 hearing is it is a class action settlement and the notices have
4 already -- were sent four months ago to class members if they
5 had objections.

6 MR. RUSSO: Your Honor, would it be possible for us
7 to leave some of the papers?

8 THE COURT: You can leave everything and anything as
9 long as it is not a security risk.

10 MR. RUSSO: Everybody will be happy about that on
11 both sides.

12 MR. KNAPP: Thank you, Vincent.

13 THE COURT: Anything else?

14 MR. CROSS: No, Your Honor.

15 THE COURT: Well, I'm going to just stick around
16 until everyone vacates. Or if you need to use the restroom, do
17 that and come back while they are vacating.

18 **(There was a brief pause in the proceedings.)**

19 THE COURT: We have only counsel in the courtroom
20 here? Anyone who is not, would you just vacate for a few
21 minutes.

22 And I'll ask counsel to please look around and make
23 sure that this is so. All right. Have a seat or stand. I
24 don't really care. You have been sitting a long time.

25 But I had asked about the status of the RFP and

1 plaintiffs asked, if I understood, to be part of that
2 conversation. I wasn't clear what the defendants' position
3 about that was.

4 I want to go off the record about this. So -- but I
5 have failed to get off the record before. I'm just formally
6 going off the record, and we're closing today.

7 **(A discussion ensued off the record at 7:17**
8 **P.M., and then the proceedings were thereby**
9 **adjourned for the evening.)**

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C E R T I F I C A T E

UNITED STATES OF AMERICA
NORTHERN DISTRICT OF GEORGIA

I, SHANNON R. WELCH, RMR, CRR, Official Court Reporter of the United States District Court, for the Northern District of Georgia, Atlanta Division, do hereby certify that the foregoing 312 pages constitute a true transcript of proceedings had before the said Court, held in the City of Atlanta, Georgia, in the matter therein stated.

In testimony whereof, I hereunto set my hand on this, the 2nd day of August, 2019.

Shannon R. Welch

SHANNON R. WELCH, RMR, CRR
OFFICIAL COURT REPORTER
UNITED STATES DISTRICT COURT