

EXHIBIT J

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

DONNA CURLING, ET AL.,)
)
Plaintiffs,)
) CIVIL ACTION FILE
vs.) NO. 1:17-CV-2989-AT
)
BRAD RAFFENSPERGER, ET AL.,)
)
Defendants.)
_____)

VIDEOTAPED DEPOSITION OF
MICHAEL BARNES
June 27, 2019
10:09 a.m.

Ross Alloy Belinfante Littlefield, LLC
500 14th Street N.W.
Atlanta, Georgia

Reported By:
Robin K. Ferrill,
CCR-B-1936, RPR
Job No. 3431556
Pages 1 - 288

1
2
3
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Registration & Elections

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2
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5
6
7
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10
11
12
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15
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17
18
19
20
21
22
23
24
25

INDEX

VIDEOTAPED DEPOSITION OF
MICHAEL BARNES
June 27, 2019

EXAMINATION BY	PAGE
Mr. Brown	8, 275
Ms. Bentrrott	143, 282
Mr. Tyson	279

DESCRIPTION OF EXHIBITS

PLAINTIFFS' EXHIBIT IDENTIFICATION	PAGE
Exhibit 20 Defendants Secretary of State Brad Raffensperger, State Election Board, and State Election Bord Members' Response to Order Dated April 16, 2019	38
Exhibit 21 E-mail with attachment to Milsteen from Marks, 10/11/17, Bates labeled CGG 1 - 190	43
Exhibit 22 Diebold Election Systems, Inc. 2005 GEMS 1.18 User's Guide, 12.4 Challenge Board	88
Exhibit 23 Diebold Election Systems, Inc. 2005 GEMS 1.18 User's Guide, 2.3 Deleting a Database	90

1	INDEX CONTINUED		
2	DESCRIPTION OF EXHIBITS		
3	PLAINTIFF'S EXHIBIT	IDENTIFICATION	PAGE
4	Exhibit 24	Ballot image printout from GEMS	93
5		computer	
6	Exhibit 25	Ballot image report from a GEMS	96
7		computer	
8	Exhibit 26	Handwritten page	105
9	Exhibit 27	Direct Record Electronic Voting	120
10		Machine Recap records	
11	Exhibit 28	Copy of photograph	123
12	Exhibit 29	USA vs. Netyksho, et al.	171
13		Indictment	
14	Exhibit 30	Russian Targeting of Election	174
15		Infrastructure During the 2016	
16		Election: Summary of Initial	
17		Findings and Recommendations,	
18		May 8, 2018	
19	Exhibit 31	"Who, What, Why" article titled	194
20		"Kemp's Aggressive Gambit to	
21		Distract from Election Security	
22		Crisis."	
23			
24			
25			

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

INDEX CONTINUED

DESCRIPTION OF EXHIBITS

PLAINTIFF'S EXHIBIT	IDENTIFICATION	PAGE
Exhibit 32	Press release from the Secretary of State's office entitled, After Failed Hacking Attempt SOS Launches Investigation into Georgia Democratic Party	197

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
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21
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VIDEOTAPED DEPOSITION OF

MICHAEL BARNES

June 27, 2019

THE VIDEOGRAPHER: Today's date is June 27th, 2019 and the time is 10:09 a.m.

This will be the videotaped deposition of Michael Barnes. Would counsel please identify themselves for the record after which the court reporter will swear in the witness.

MR. BROWN: Bruce Brown representing the Coalition plaintiffs.

MR. BRODY: David Brody representing the Coalition plaintiffs.

MS. BENTROTT: Jane Bentrrott representing the Curling plaintiffs.

MR. TYSON: Bryan Tyson, Taylor English, representing the State defendants.

MR. JACOUTOT: Bryan Jacoutot, Taylor English, representing the State defendants.

MS. BURWELL: Kaye Burwell, Fulton County.
MICHAEL BARNES,

called as a witness, having been duly sworn by a Notary Public, was examined and testified as follows:

///

1 EXAMINATION

2 BY MR. BROWN:

3 Q. Please state your full name for the record.

4 A. Michael Leon Barnes.

5 Q. Mr. Barnes, my name is Bruce Brown. We
6 have met.

7 What is your current position?

8 A. I am currently employed with the Secretary
9 of State's office where I serve as the Director for
10 the Center for Election Systems.

11 Q. How long have you been the Director of the
12 Center of Election -- for Election Systems?

13 A. At the Secretary of State's office, I
14 started back with the Secretary of State's office on
15 January 1 of 2018.

16 Q. And what did you do before January 1, 2018?

17 A. Prior to moving back to the Secretary of
18 State's office, I was the Director for the Center for
19 Election Systems at Kennesaw State University where I
20 was employed by Kennesaw State from June 2005 through
21 December 31st, 2017.

22 Q. And focusing on your tenure at KSU --

23 A. Uh-huh.

24 Q. -- could you describe in general your
25 responsibilities?

1 A. As director, which I served as director
2 from 2010 through the Center's closing in 2017, I
3 oversaw the daily operations of the Center, managed
4 its ballot building operations, as well as its -- as
5 well as its Express Poll data set building and also
6 its training responsibilities for educating election
7 officials within the State.

8 Q. I want to ask you some general overview
9 questions about the Center in the 2016 time frame.

10 A. Okay.

11 Q. And the computers have been described in
12 different ways, but what I would like to ask you
13 about is what you have referred to as the servers.
14 Are you with me?

15 A. I believe so, yes.

16 Q. Okay. And what is a server?

17 A. A server in normal discussions is a
18 computer that is networked to the outside world.
19 Sort of like a web server. That is one definition of
20 a web -- of a server. But there -- in our
21 nomenclatures in educating election officials on use
22 of their voting equipment, we have referenced a
23 particular computer in use also as a server, but it
24 doesn't fit that same definition.

25 Q. And what is -- what is -- which one is that

1 one?

2 A. That's referenced as the GEMS server. A
3 better definition really should be GEMS computer, but
4 we started with saying "GEMS server" way back in 2002
5 and we have just maintained that nomenclature.

6 Q. And does that, the GEMS server or computer,
7 have a certain name at CES?

8 A. The -- I believe we called that particular
9 box our ballot builder.

10 Q. I will come back to that.

11 But other than the computer that was the
12 ballot builder, what other servers or computers did
13 you have?

14 A. We had another computer that was called our
15 Epic server and it was one of that one. And then we
16 had a web server for displaying our Center's website.

17 Q. And what did the Epic server do? Is it
18 E-p-i-c?

19 A. E-p-i-c. The Epic server produces the data
20 files that are used to power the Express Poll, poll
21 book.

22 Q. Other than the ballot builder, the Epic
23 server, and the web server, were there other
24 computers or servers at CES?

25 A. I do not recall there being more than those

1 three servers.

2 Q. Okay. And let me focus on the ballot
3 builder. That's just a computer, right, a PC?

4 A. Ballot builder was a computer. A --
5 basically a storage box. It was sort of a central
6 computer where we stored databases that had been
7 built for election. So we had additional computers
8 in the office connected to that ballot building box.
9 So that as a file was built on a computer by a ballot
10 builder, a individual, that file would then be saved
11 back to the central location, the ballot builder box.

12 Q. And was the ballot builder connected to the
13 Internet?

14 A. It was not.

15 Q. And then how many computers connected to
16 the ballot builder?

17 A. There were a number within the office. I
18 don't know the specific number.

19 Q. Would the people who were actually building
20 the ballots use those other computers that were
21 connected to the ballot builder?

22 A. Yes.

23 Q. And how were they connected to the ballot
24 builder?

25 A. Hard wire.

1 Q. But maybe a dozen of those?

2 A. Honestly, I don't recall how many were
3 connected.

4 Q. What software would the ballot builder use?

5 A. The ballot builder box really did not have
6 any software on it. It stored the files. So it
7 basically was a folder directory where the files were
8 stored.

9 Q. The computers that were networked into the
10 ballot builder, as to those, what software did they
11 use?

12 A. They used the ballot building software that
13 the State of Georgia used called GEMS.

14 Q. So each of those computers ran GEMS,
15 correct?

16 A. Each of those computers had the GEMS
17 executable installed on them, yes.

18 Q. Did the ballot builder have a GEMS
19 executable installed on it?

20 A. I do not believe it did.

21 Q. What was the operating system for the
22 network for the computers that fed into the ballot
23 builder storage box?

24 A. Honestly, do not recall.

25 Q. Once the -- what did the ballot storage

1 computer do with the ballots that were fed into it by
2 the various computers?

3 A. It was just -- it was just literally
4 storing a backup copy of the election database that
5 was being built. It was holding onto that storage.

6 Q. We will get this in a little bit greater
7 detail, but I'm going to try to ask you questions
8 about the flow of the various files.

9 A. Okay.

10 Q. The ballot themselves eventually made it
11 downstream.

12 A. Uh-huh.

13 Q. Right?

14 And how would -- just describe in your own
15 words how the built ballots would get from the
16 individual networked computers to, for example, the
17 counties?

18 A. Okay. So my understanding of your question
19 is the process of constructing the database and then
20 all the way until the point of delivery to a county?

21 Q. Sure.

22 A. A ballot builder, we had within the office
23 at Kennesaw, we had three specific ballot builders.
24 That was their permanent job. And they would first
25 collect information from counties through phone calls

1 or through faxes or through, in some circumstances,
2 e-mails received. And take that information from the
3 county and begin constructing a database to
4 facilitate the needs of the county to execute the
5 election at hand.

6 The data would be collected and then the
7 ballot builder would sign into their ballot building
8 computer at their desk, which had no external network
9 connection to the outside world. They would sign
10 into that device and open up the GEMS program and
11 begin building a data set for the election at hand.

12 The data set would be built there on the
13 local box by the ballot builder and they would retain
14 a copy of that on their box until a point in time
15 where they had completed their work. Once they had
16 completed their work, they would then save a copy of
17 the database that they had completed to the ballot
18 building server.

19 Once that record was placed, it would be
20 placed into a folder called "review," where then
21 others in the office would then take that copy that
22 had been saved to the ballot building server and load
23 that copy to their individual ballot box station
24 within the office, and then perform a review of the
25 database to validate that what has been constructed

1 by the ballot builder is equal to the information
2 provided by the county or jurisdiction. That we have
3 the right precincts in place, the right combos in
4 place, the right districts, the right polling
5 information, the right races, the candidates in the
6 proper order.

7 Once the review process has been completed,
8 then the person reviewing the database would then go
9 back to the server and move the file from the review
10 folder to the "ready for audio check" folder. When
11 it was placed, when that database was placed in the
12 ready-for-check folder, then another member of the
13 staff would load that data file onto their desktop
14 computer that's connected to the ballot building
15 network, load that database to that computer, open up
16 GEMS, would open up the databases and then would
17 create a memory card from the database for use on a
18 touch screen voting device, a DRE.

19 The memory card would be placed into a DRE
20 device and then the ballot would be reviewed in two
21 ways. It would be reviewed visually on the DRE and
22 would it also be reviewed for audio content to
23 confirm that we had placed all the proper audio files
24 equal to the text that was displayed on the DRE.

25 So we would look at all ballot styles to

1 make sure they were complete, make sure that they
2 were appearing as required, making sure that all the
3 candidates were in place, that they were appearing
4 properly, that there were no differences in display
5 for one candidate versus another candidate. We would
6 also validate that the proper audio files were in
7 place for those voters that needed the ADA audio
8 ballot. Make sure that if it's saying candidate one
9 that it's reading candidate one, so that there's no
10 difference between an audio readout and a visual
11 display.

12 Once that review was done and the audio
13 check was completed and everything was shown as
14 proper, then whomever was checking that database at
15 that point again would go back to the file folder on
16 the server and they would move the database from the
17 ready for audio check to the ready to generate proofs
18 location.

19 Once the database was in a ready for
20 generating proofs, then a member of the office would
21 load that database to their local GEMS computer and
22 then open up the GEMS database and then produce
23 ballot proofs where they would produce pdf copies of
24 the optical scan, the optical scan ballots that were
25 residing within the GEMS database. And they would

1 also produce a set of reports, all in pdf form, that
2 outline various items within the database. The
3 voting locations, what precincts are connected to
4 those voting locations, what district combos are
5 related to those precincts, and finally what ballots
6 are related to those individual based districts.

7 So those reports, along with the ballots
8 themselves all in pdf form, would be placed into a
9 folder and then that folder would then be, in 2016,
10 would be placed on the Center for Election System's
11 website to a specific county folder, where a county
12 had user rights and privileges to access that data
13 file for download from our website for approving
14 purposes. Along with the reports and the ballots was
15 also a sign-off sheet for the counties to return to
16 the Center for Election Systems upon completion of
17 their review.

18 Once the packet was received by the county,
19 the county then had the -- we normally asked them to
20 turn that back around in 48 hours, because we would
21 normally be in a ballot-building environment in a
22 very tight window, compressed time. But we would
23 give ample time for the counties to review the
24 ballots.

25 If they found any issues in the ballot

1 proofs or any issues in the reports that they
2 gathered, then they would notify us in writing of
3 what the issues may be. That writing may be, again,
4 through e-mails, could be through faxes. We didn't
5 just take phone calls. We would listen to them on
6 the phone, but we wanted written information on what
7 was wrong with the ballots so that we could place
8 that into our record for the ballot building.

9 And if there were issues that needed to be
10 addressed in the database, then the database would be
11 updated by the ballot builder and then it would go
12 through the review process again.

13 If the county reviewed the ballot and found
14 it to be accurate, found the reports to be accurate,
15 then they would return a signed sign-off sheet to the
16 Center for Elections. And then the Center would then
17 take the data file, the GEMS database that's still
18 sitting there on the ballot build server and would
19 move it from -- by this point in time it was in a
20 folder called "ready for county review."

21 Once we had a sign-off received from the
22 county, then that would be moved from that folder to
23 the next folder in the sequence which was ready to
24 generate print proofs. Where we would generate print
25 files for the individual printers that the counties

1 had contracted with. Those print files would be in
2 pdf form and then those print files would be
3 transmitted to various printers based upon how they
4 wanted those files delivered.

5 After the print files were sent to the
6 printer, then we would take the database file on the
7 ballot server and move it to the next folder, and the
8 next folder was ready to generate a CD. So the data
9 file would be burned from ballot builder onto a
10 physical CD and then that CD packaged and forwarded
11 to the individual county.

12 Q. And then to carry it on through, the county
13 then would take that CD and load it into their own
14 county GEMS database computer.

15 A. Correct.

16 Q. And the county's GEMS database computer
17 would then, probably among other things, generate
18 memory cards that would be used in the DRE machines
19 themselves.

20 A. Correct.

21 Q. And then people would vote.

22 A. Uh-huh.

23 Q. And then what would happen to the memory
24 cards after people voted?

25 A. At the end of the polling operation at the

1 close of polls, the -- after all of the reports had
2 been printed out from the DREs that are required at
3 the close of polls which showed what each individual
4 device had collected during the operating process, a
5 poll worker is instructed to turn the DRE machines
6 off and extract the memory cards and return the
7 memory cards, along with copies of the tapes produced
8 in the polling location, back to the election office,
9 the county election office.

10 Q. And then what does the county do with the
11 memory cards and those reports?

12 A. The memory cards are to be uploaded back
13 into the county GEMS computer for transfer of the
14 election results collected or the election
15 information collected by the DREs and store it to the
16 memory cards and upload into the GEMS computer for
17 vote tabulation.

18 Q. And which GEMS computer vote tabulation is
19 that?

20 A. That's all done at the county level.

21 Q. And so the actual record of the votes is
22 stored on the memory card and then transferred to the
23 county's GEMS computer, correct?

24 A. The memory card is in the -- is in the
25 touch screen, it collects the information. The

1 memory card is then extracted from the touch screen
2 and brought back to the county election office and
3 uploaded into GEMS, yes.

4 Q. And then how does that record get from GEMS
5 back to where it needs to go?

6 A. When you say "back to where it needs to
7 go."

8 Q. Does it get transferred back to the
9 Secretary of State for final tabulation?

10 A. Well, all tabulation is done at the county
11 level. There is not tabulation done at the state
12 level. There is certification of results at the
13 state level but, there is no tabulation done at the
14 state level. All tabulation is done at the county
15 location.

16 The county, once they have completed doing
17 their tabulation, will go through a process of
18 certifying their returns. Reports printed from their
19 GEMS computer are compared against the tally tapes
20 that are brought back from the polling location to
21 validate vote counts. They also double-check their
22 precinct recap sheets to see how many voters
23 participated, a lot of reconciliation takes place.

24 Once the county completes all of their
25 tasks, which there are a large number of those tasks,

1 then the counties will certify their returns and make
2 those returns, bring those physical returns back to
3 the Secretary of State's office. And if there is a
4 state election involved, then the state will certify
5 those returns.

6 Q. And then how do they transmit their
7 certified returns back to the Secretary of State?

8 A. That's -- that's a physical record that's
9 placed into a sealed envelope and it is
10 hand-delivered to the Secretary of State.

11 Q. From every county?

12 A. Yes.

13 Q. Let me go back and ask a few questions
14 about this work flow.

15 You were very careful to describe different
16 folders --

17 A. Uh-huh.

18 Q. -- that the, the process went through.

19 And can you just review the different
20 folders that were used to sort of track the process,
21 all the way through? It was about four or five of
22 them.

23 A. There are -- I think, let's see -- I have
24 to sort of go in my memory bank.

25 The first folder was like ready for review.

1 The second folder was ready for audio review. The
2 third folder was ready to generate proofs. The
3 fourth folder was proofs generated. And that's where
4 we would hold the copies of the pdf proofs that we
5 had generated for that particular database.

6 The fifth folder was ready for county
7 review. The sixth folder was ready for print. The
8 seventh folder was ready to generate CD. The eighth
9 folder was CD generated. The ninth folder was CD
10 checked. The 10th folder was ready to generate
11 sample ballots. The 11th folder was ready to
12 generate UOCAVA ballots, and the 12th folder was
13 finished.

14 Q. And within each of those folders, would be
15 subfolders by county?

16 A. No. They would -- there would be a folder
17 alone and the only thing that resided in that folder
18 except for the sample folder and the UOCAVA folder
19 would have been a copy of the database.

20 So, for example, Kaplan County. That
21 database would have been placed into ready for
22 review. When it was done for ready for review, it
23 would then be moved from the first folder to the
24 second folder. So there was always only one copy of
25 the database in that folder outlined. That way we

1 would always make sure we would have the right
2 database.

3 So there was wasn't a need for a subfolding
4 system within the folders because the files
5 themselves are identified by the county to which they
6 are they reside.

7 Q. But if I looked in the ready for review
8 folder, would I see 159 databases?

9 A. Potentially at the beginning. But normally
10 what would happen, we would not finish all 159
11 databases on the same day. We would start the build
12 process and as one finished, one would enter review.
13 And then it would start moving down that list of
14 folders through our review process.

15 And then as a ballot builder completed a
16 different database, it would again be entered into
17 that first folder and then moved down the strata.

18 Q. But if, if done properly, the same database
19 would never reside in more than one folder.

20 A. Correct.

21 Q. Okay. Who -- do you recall who in the 2016
22 time frame were the individuals -- you have
23 identified three people who are responsible for the
24 ballot building.

25 A. Uh-huh.

1 Q. Do you recall who they were?

2 A. I do.

3 Q. And who were they?

4 A. The three ballot builders employed by
5 Center for Election Systems at the time were Denise
6 Dessert, Conner Howard, and Laura Johnson.

7 Q. Do they work for you now?

8 A. They do not.

9 Q. And did they go from KSU to the Secretary
10 of State?

11 A. They did not.

12 Q. And you are the only one who did, right?

13 A. Correct.

14 Q. Okay. You described the process, the
15 review process by the counties.

16 A. Uh-huh.

17 Q. And that ended up in the counties either
18 saying you have got a correction or signing off on
19 it.

20 A. Uh-huh.

21 Q. Are you with me?

22 A. Uh-huh.

23 Q. Physically, what did they receive to
24 review? Pdfs?

25 A. Correct.

1 Q. Okay. So the counties in the review
2 process would not receive a database.

3 A. That is correct.

4 Q. Okay. And the pdfs would show what again?

5 A. The pdfs would be watermarked copies of the
6 optical scan ballots. They would be the layout of
7 the optical scan ballot as what a voter would see
8 except they had a Walmart -- Walmart? A watermark on
9 them that said "proof." So -- and it would be all
10 ballot styles for that election. So if the county
11 had five precincts and there was a different ballot
12 for each precinct, there would be five individual
13 ballot proofs.

14 And then in addition to that were reports
15 generated from the GEMS program that outlined what
16 were the polling locations, what were the precincts
17 connected to those polling locations, what were the
18 district combos associated to those precincts, and
19 what ballot styles are associated to those individual
20 district combos.

21 Q. The pdfs that you described are pdfs of the
22 ballot as it appeared on the -- as it would appear on
23 the, on the DRE machine?

24 A. It is a copy of the optical scan ballot.

25 Q. What does that mean?

1 A. When GEMS produces a ballot, it produces
2 actually two ballot styles, two ballot images. One
3 is a physical printout image which is used for,
4 instead of Georgia, mail-out absentee balloting and
5 for provisioning ballot. And that is referenced as
6 an optical scan ballot, and it lays the races out in
7 order, top to bottom, left to right.

8 The GEMS computer also takes that same
9 information in relation to races, but also produces a
10 DRE display of the ballot which shows the first race,
11 followed by the second race, followed by the third
12 race. And we would set the DRE in a two-column
13 configuration. So the first race would be the first
14 race, second race would be below it on that column if
15 there was enough space. If not, it would be on the
16 beginning of the second column and then progress in
17 that nature.

18 Q. Do the counties review the ballot as it
19 would appear on the DRE screen?

20 A. During our review phase, they did not.

21 Q. Okay. And then after they sign off on a
22 ballot or a set of ballots really, right.

23 A. Uh-huh.

24 Q. And it goes through the additional process,
25 they then get their database on a CD?

1 A. Correct.

2 Q. And in 2016 time frame, would they ever
3 download a database from the web server?

4 A. No. Protocol was that the database would
5 be delivered via CD.

6 Q. Could they do that if they needed to?

7 A. If there was an absolute emergency in
8 place, meaning that there was something that was
9 found amiss with the database the day before
10 balloting had to begin and advanced voting and that
11 county was way down in southeast Georgia or southwest
12 Georgia, then we may look at the opportunity of
13 pushing the file out on the web server for them to be
14 able to pull it down quickly. But that would be
15 something that would be discussed with the Secretary
16 of State's office to get clearance with them first.

17 Q. Did that ever happen?

18 A. We did have emergencies pop up. I don't
19 remember the last year that that situation happened
20 where something happened literally the day before
21 advanced voting began and we had to move a data file
22 from our office to the county office through the web
23 server. But I do not recall when that was last done.

24 Q. But the database themselves were on the web
25 server.

1 A. It resided on the web server for the county
2 to pull it off. Once the county notified us that
3 they had the file, then the file was removed from the
4 web server.

5 Q. But the -- you described the -- you
6 described all these various folders, ten or 12 of
7 them --

8 A. Uh-huh.

9 Q. -- as the, as the database passes through
10 the process. Are you with me?

11 A. Uh-huh.

12 Q. Are all those folders on the ballot builder
13 computer?

14 A. Yes.

15 Q. Are they anyplace else?

16 A. No.

17 Q. And there are no backups made of that?

18 A. There was backups made of the ballot
19 building folder periodically as part of the protocol
20 for the Center of Election so that we make sure that
21 if that ballot building computer broke down, we would
22 have still have backup copies of that device.

23 Q. How did you do a backup of the ballot
24 builder?

25 A. I just know that a backup was done. I

1 don't know how it was done.

2 Q. And it was not functional other than to be
3 a backup; is that correct? Well, it wasn't -- no one
4 would use it other than if there was a problem with
5 the ballot builder.

6 A. Correct. It was a -- it was a backup copy.

7 Q. Do you recall what the backup copy was
8 called?

9 A. I do not.

10 Q. Getting straight the different servers.
11 The ballot builder you have described, how did the
12 ballots get from the ballot builder computer to the
13 web server?

14 A. Well, again, that would be something that
15 would only be done in emergency circumstances. That
16 was not something that was done readily. And to be
17 honest with you, I don't remember the last time one
18 was moved from one location to the other. And I
19 don't recall how it was moved from one way to the
20 other.

21 Q. Did the web server have the GEMS database
22 application on it?

23 A. It did not.

24 Q. You described a process where the counties
25 would check the pdfs of the ballots for errors.

1 A. Uh-huh.

2 Q. You need to say yes for the record.

3 A. Oh, yes. Yes.

4 Q. Did, did KSU or did CES keep copies of the
5 written notifications of problems with ballots?

6 A. We did. Every time that we would build a
7 database, we created an individual folder for that
8 database process that included copies of any
9 notifications we got from counties in relation to the
10 races on the ballot, any e-mail communication that
11 may have been had between the county and the ballot
12 builder about building the database. And any records
13 of correction, those sign-off sheets with notations
14 of what needed to be corrected or copies of the pdf
15 ballots with markups were put into that folder and
16 retained.

17 Q. And those -- CES still has those folders,
18 correct?

19 A. I believe when the Secretary of State's
20 office absorbed CES, those folders came forward in
21 that transition.

22 Q. And where are they, where would they be
23 now?

24 A. I believe all those folders reside at the
25 Center for Election Systems operations today.

1 Q. Okay. Who checks the -- for mistakes in
2 the state-wide races; how is that done?

3 A. Every ballot is looked at as an individual,
4 so we had the three ballot builders that would build
5 their databases. If you didn't build the database,
6 then you were allowed to check any other's work. But
7 there were also two people within the Center for
8 Election Systems that were also educated on ballot
9 building and could review ballots for content to make
10 sure that those were right, I being one of those.

11 Q. So you described a review process, that
12 would be done by other ballot builders; is that
13 correct?

14 A. Yes, yes.

15 Q. Or by you.

16 A. Correct.

17 Q. And you are familiar with how GEMS, the
18 GEMS database works.

19 A. I am, correct.

20 Q. Now, who had access to the ballot builder
21 computer?

22 A. Who had access to the computer itself?

23 Q. Yes.

24 A. I had access into the room where the ballot
25 builder computer was. The assistant director for the

1 Center had access to the room where the ballot
2 building server was. The executive director for the
3 Center had access to where the server was located and
4 the IT -- I'm trying to think of his title. But our,
5 sort of our IT operations in-house had access to that
6 room.

7 Q. And in the 2016 time frame, who was the
8 assistant director?

9 A. Stacy Jackson.

10 Q. Okay. And who was the executive director?

11 A. Merrill King.

12 Q. And did you report to Merrill King?

13 A. I did.

14 Q. And who is the IT operations director?

15 A. Steven Dean.

16 Q. Okay. And then what sort of security was
17 on the ballot builder to prevent someone who
18 shouldn't be looking at it, looking at it?

19 A. Everything was user name and password
20 protected.

21 Q. If someone gained access, would the
22 computer make a record of who was gaining access to
23 it?

24 A. That's a question I don't know.

25 Q. And where were people's credentials to sign

1 on, user name, password, where, where would they
2 store it?

3 A. I don't know.

4 Q. Did any nonemployee or contractors have
5 access to the ballot builder?

6 A. They did not.

7 Q. You have described the ballot building
8 process at high level in response to my questions in
9 the 2016 time frame.

10 A. Uh-huh.

11 Q. At a high level, is that the process that's
12 used today?

13 A. The same folder structure and how databases
14 move through, yes.

15 Q. Are the same -- not the same physical
16 hardware, but functionally the same servers used for
17 the process?

18 A. No.

19 Q. What computers are used?

20 A. Today?

21 Q. Yes.

22 A. Everything today is hardware put in place
23 by the Secretary of State's office.

24 Q. Does the hardware have the same function as
25 it did in 2016?

1 A. Say -- does it do the same thing? Does the
2 hardware hold the GEMS executable?

3 Q. Right. Well, you described -- do you have
4 a ballot builder computer now?

5 A. Do we have a ballot builder server?

6 Q. Yes.

7 A. Yes. I don't know what the Secretary of
8 State's office names it as, but, yes.

9 Q. But do you use -- do you use it in the same
10 way roughly?

11 A. In the same way, where the people building
12 ballots have a computer that holds the GEMS
13 executable. They build a data file and then it is
14 saved back to that server.

15 Q. And is it networked by wire?

16 A. Hard wire, yes.

17 Q. And how many ballot builders do you have
18 today?

19 A. I have three.

20 Q. And who are they?

21 A. Today I have Xavier Harris, Chris Balleau,
22 and Sam Sheldon.

23 Q. And who has -- who has Merrill King's
24 position?

25 A. There is no executive director anymore.

1 Q. And do you have -- do you have assistants?

2 A. In --

3 Q. Do you have assistants to you?

4 A. I report to the -- the deputy Secretary of
5 State.

6 Q. And who is that?

7 A. Jordan -- and I have the hardest time
8 saying her last name -- but it's F-u-c-h-e-s.

9 Q. And then who reports to you?

10 A. The three people I mentioned previously are
11 currently -- are my employees and I have one more
12 employee that is -- actually he's a employee of the
13 IT department, so he doesn't actually report to me,
14 but he resides at Center for Election Systems.

15 Q. And who is that?

16 A. His name is Terrance Reese.

17 Q. Okay. And today, are the -- do the
18 counties review pdfs in the same way as they did in
19 2016?

20 A. Yes.

21 Q. And today, do the counties -- well, you
22 described a process where CES will send pdfs of
23 ballots, rough drafts of the ballots to the counties
24 for their review. Is that still done in the same way
25 now?

1 A. Yes, yes.

2 Q. And the counties still today report back in
3 writing as to mistakes --

4 A. Yes.

5 Q. -- or problems with the ballots, right?

6 A. Yes, yes.

7 Q. And then after sign-off and after you do
8 your final review, will you still send by CD the
9 completed GEMS database for each county?

10 A. Yes.

11 Q. And today, is it the same as except in an
12 emergency, a county would not have a GEMS database
13 downloaded directly from a server to the county,
14 correct?

15 A. It's the Secretary of State's position that
16 everything is physically delivered. There is no
17 electronic transfer of database.

18 Q. Okay.

19 MR. BROWN: Just one second.

20 Q. (By Mr. Brown) I'm going to hand you what
21 has been marked, what's going to be marked as
22 Plaintiff's Exhibit 20. And for the record, we are
23 continuing the numbering that was started in the
24 Ledford deposition where Exhibits 1 through 19 were
25 marked.

1 (Plaintiffs' Exhibit 20, Defendants
2 Secretary of State Brad Raffensperger, State
3 Election Board, and State Election Board Members'
4 Response to Order Dated April 16, 2019, marked
5 for identification.)

6 Q (By Mr. Brown) Let me direct your attention
7 to page 7. And for the record, that Exhibit 20 is a
8 copy of Defendant's Secretary of State Brad
9 Raffensperger, State Election Board response to order
10 dated April 16, 2019. I do not have a document
11 number for that filing unfortunately, but let me
12 refer to page 7.

13 If you look at the first bullet point,
14 underneath subparagraph 3, the brief says that the
15 Secretary of State prepares a GEMS database
16 containing the contents and candidates for the
17 scheduled election that is proofed and approved by
18 the county prior to being finalized.

19 The database itself isn't proofed and
20 reviewed, is it?

21 A. Reports from the database are generated and
22 provided to the county for review.

23 Q. Okay. But the county again does not review
24 or proof the GEMS database itself.

25 A. Again, I would just state my previous

1 answers that the county approves the reports
2 generated from the database.

3 Q. But it does not review the database itself.

4 A. We do not provide them a physical copy of
5 the database before sign-off.

6 Q. Okay. And then the drafts pdfs, are
7 those -- okay.

8 And the CDs that finally go to the
9 counties, are those encrypted?

10 A. Yes.

11 Q. You described some reports that went with
12 the ballots to the counties for the review process.

13 A. Uh-huh.

14 Q. Are you with me?

15 A. Yes.

16 Q. Could you describe those again?

17 A. I believe there are four reports that we
18 provide along with the individual ballots and it's
19 the vote center with cards. Which outlines the
20 voting locations, what precincts are connected to
21 those voting locations, what director combos are
22 connected to those precincts. And finally what
23 ballot styles are connected to those district combo
24 values. So that's one report.

25 Another report is reporting precincts with

1 bases. This outlines the number of precincts and the
2 various district combos associated to each individual
3 precinct. And we provide a base precincts with cards
4 report, which outlines the base precincts and the
5 physical ballot styles associated to each base
6 precinct.

7 And then finally, there's a ballot order
8 report that outlines the total number of ballots
9 involved in the election.

10 Q. In the election for that county.

11 A. In the election for that county, correct.

12 Q. That's sort of an index? Or a checklist
13 kind of, kind of report?

14 A. It's -- the ballot order report?

15 Q. Right.

16 A. The ballot order report is more for helping
17 them communicate with their ballot printer.

18 Q. I see. Are the reports that you described
19 generated by the GEMS database?

20 A. They are -- you open up the GEMS database.
21 You select the report that you needs to generate and
22 then the pdf is produced.

23 Q. So the GEMS database serves as sort of the
24 vehicle for producing what the counties are going to
25 receive.

1 A. Yes.

2 Q. Okay. What is a district combo?

3 A. A district combo is a value that's set up
4 within the voter registration system.

5 Q. And -- okay. It's a value that's set up in
6 the voter registration system?

7 A. Uh-huh.

8 Q. And is that value assigned to each voter?

9 A. When a voter registers to vote, they, based
10 upon their residency, are assigned to a particular
11 precinct, and then within that precinct they are
12 assigned a district combo value. The district combo
13 value relates to the political district that that
14 voter resides in.

15 Q. And is there one ballot for each district
16 combo value?

17 A. Yes.

18 Q. Is there only one district combo value for
19 each ballot?

20 A. No.

21 Q. Okay. When would you have more?

22 A. I'm trying to think of a good example.

23 You have a precinct, let's say that the
24 election that we have is a county-wide election. The
25 only election on the ballot is a single race and it

1 is a county-wide election. The precinct itself,
2 however, has multiple district combo values. Because
3 the precinct has multiple county commission
4 districts.

5 The value that's given to the voter is
6 based upon where they live. So they all live in the
7 county, so they are all going to be eligible for a
8 county-wide election. But they are only eligible for
9 an election in their specific county commission
10 district if that election is ongoing. So the
11 district combo value could lead to a different ballot
12 style for each combo if all the races that make up
13 the district combo value are being ran.

14 But if some of those races are not being
15 ran and it's just a single county-wide race on the
16 ballot, then the combos are still there, but it's
17 just one ballot style associated to all the various
18 combos.

19 Q. Okay. Thank you.

20 And the district combo value that -- the
21 information that informs the district combo value
22 comes from where?

23 A. That is all done at the county level in the
24 voter registration system.

25 Q. Okay. And then how does it get from the

1 voter registration system into the GEMS database?

2 A. The voter registration system can produce a
3 printed report and it's called a county precinct list
4 report. And the county precinct list report is
5 printed out by members of my office. And on that
6 report contains all of the precincts within a given
7 location, given jurisdiction, a county. The voting
8 locations, the district combo values, and the various
9 districts that those combos are connected to. And
10 that's a physical report that our ballot builders
11 then take and key in information manually into a GEMS
12 database.

13 Q. And they key it in, in the appropriate --
14 on the appropriate table for a particular ballot.

15 A. They -- correct. They key it into the GEMS
16 database system.

17 Q. Okay. And let me shift gears a little bit.
18 I'm going to hand to you a large exhibit which will
19 be marked as Exhibit 21. I'm going to give you this
20 one. That is single-sided, but not bound and then --
21 here you go, this is double.

22 (Plaintiffs' Exhibit 21, E-mail with
23 attachment to Milsteen from Marks, 10/11/17,
24 Bates labeled CGG 1 - 190, marked for
25 identification.)

1 MR. TYSON: I'm sorry.

2 MS. BURWELL: Just one second I think we
3 got two different things.

4 MR. TYSON: Just to be clear, this one has
5 two pages per, one page per?

6 MS. BURWELL: That might be your next
7 exhibit.

8 MR. TYSON: That's the same thing.

9 Q. (By Mr. Brown) I have marked for
10 identification Exhibit 21. Exhibit 21 is a 190-page
11 document which has been Bates labeled CGG 1 through
12 CGG 190. The first page of CGG is a October 11, 2017
13 letter to Jeff Milsteen. And just for reference,
14 CGG 3 is an e-mail from Jeff Milsteen to Marilyn
15 Marks saying: Attached please find the records
16 responsive to your open records request.

17 The -- you don't have to believe me, but I
18 will represent to you that it is our position that
19 the documents in this exhibit are the documents that
20 were produced by Mr. Milsteen in response to an open
21 records act request. Okay, are you with me?

22 A. Yes.

23 Q. If you would first turn to page 186. And
24 do you recall being forwarded from Merrill King the
25 e-mail that appears on page 186 from Logan Lamb?

1 A. I don't recall seeing this specific e-mail,
2 but I know that I did receive a lot of forwards at
3 the time.

4 Q. Okay. If you turn to page 185, do you see
5 where Mr. King, I believe, forwards Logan Lamb's
6 e-mail to Steven Dean, Jason Figueroa and yourself?

7 A. Yes, I listed as a cc.

8 Q. Okay. And then do you see on page 184
9 where you, in turn, forward Mr. King and Mr. Lamb's
10 e-mail to, among others, Steven Gay?

11 A. I do.

12 Q. Okay. I'm going to hand to you next the
13 declaration of Logan Lamb, which is document 2581.

14 MR. TYSON: Are we marking that, Bruce?

15 MR. BROWN: I'm not going to mark it as a
16 an exhibit.

17 Q. (By Mr. Brown) And have you reviewed the
18 declaration of Logan Lamb before?

19 A. I have not.

20 Q. Okay. So you haven't reviewed what he says
21 about his access to the KSU server?

22 A. I have not read this declaration.

23 Q. Okay. Reviewing document 2581, page 4 of
24 the declaration, it's page 129 of the filing in
25 Federal Court. Are you with me?

1 A. Yes.

2 Q. Okay. Here Mr. Lamb says that in paragraph
3 14: After this discovery, I wrote a quick script
4 simple program to download what public files were
5 available from the CES server here.

6 And he then says
7 <https://elections.Kennesaw.edu>. Do you see that?

8 A. I do.

9 Q. And what is elections.Kennesaw.edu?

10 A. That was the Center for Election Systems at
11 Kennesaw State's website.

12 Q. Was that the web server that you described?

13 A. The web server hosted that website.

14 Q. He then says: No passwords or
15 authentication were required to gain access to these
16 sensitive files. Do you see that?

17 A. Yes.

18 Q. Do you have any reason to doubt that
19 statement?

20 A. My knowledge of the website as it was
21 constructed was that if a county was attempting to
22 access the website to their particular page, that
23 they had to provide user name and password to access.

24 Q. And so do you think he didn't gain access
25 or do you think he -- how do you think he did it?

1 A. I don't know how he did it.

2 Q. Okay. Do you have any doubt that he did do
3 it?

4 A. I have no reason to say someone has -- is
5 not saying accurately what they did.

6 Q. He then says: After running the script to
7 completion, I had acquired multiple gigabytes of
8 data. This data was comprised of many different
9 files and formats, but among them were, and then he
10 lists a bunch of different files.

11 Are you with me?

12 A. Yes.

13 Q. He says he accessed voter registration
14 databases filed with personally identifiable
15 information of over six million voters. Do you see?

16 A. That I do.

17 Q. And do you have any reason to doubt that
18 that statement is incorrect?

19 A. If he is stating that that file was present
20 on that server on August 24th of 2016, then I would
21 have reason to debate that.

22 Q. And why, what's the basis for doubting
23 that?

24 A. Just understanding the time line of when we
25 would build this particular data file. If it is a

1 polldata.db3 file containing the full voter set for
2 an election, that file is not built for an election
3 until 10 days prior to that given election. So there
4 was no election schedule that I'm aware of within 10
5 days of August 24th, 2016.

6 Q. Could it have been the file for a prior
7 election?

8 A. I don't know.

9 Q. Could have been?

10 A. I don't know.

11 Q. Other than the file for the upcoming
12 election having not being built by the time that --
13 in August of 2016, do you have any other reason to
14 disbelieve that he acquired it by download, voter
15 registration databases filled with personally
16 identifiable information of over six million voters?

17 A. I don't know.

18 Q. You don't have any other reason for
19 doubting that.

20 A. No.

21 Q. And that if he did do that, that data would
22 include driver's license numbers, birthdays, full
23 home addresses, the last four digits of Social
24 Security numbers, correct?

25 A. Driver's license number, yes; birth date,

1 yes; full home address, last four of Social, I do not
2 know.

3 Q. Okay. He also says that he acquired the
4 election management system GEMS databases in dot-GBF
5 and dot-MDB extensions. Do you have any reason to
6 doubt that statement?

7 A. I have reason to doubt an MDB extension.

8 Q. Okay. What is an MDB extension?

9 A. Microsoft Access.

10 Q. Okay. But doesn't the GEMS management
11 system database run on a Microsoft Access
12 application?

13 A. That is the -- GEMS -- you enter data
14 through GEMS, it then resides in Microsoft Access
15 tables.

16 Q. Right. So you don't think he got -- he had
17 access to the files with the MDB extension?

18 A. I do not believe so.

19 Q. Okay. What about GBF extension?

20 A. It's possible that there was a training
21 database on that server that a county may have asked
22 for to do their own local training exercises at that
23 time.

24 Q. So it's possible that he received a full
25 database, full GEMS database, correct?

1 A. A training database.

2 Q. But it was a full GEMS database.

3 A. A training database. Yes, it was a GEMS
4 training database.

5 Q. But it was a GEMS database that had been
6 constructed for training people how to use GEMS,
7 correct?

8 A. Correct. Mainly constructed to train
9 people how to train poll workers.

10 Q. But it was a fully functional GEMS
11 database, correct?

12 A. It didn't have everything that would be in
13 a normal election GEMS database. Like in relation to
14 number of races, how it -- you know, how its
15 precincts may or may not have been constructed would
16 not have been same to that, but it would have been a
17 usable database for training purpose.

18 Q. But it would be -- would it look like a
19 database before information was put into it?

20 A. Yes.

21 Q. So the architecture of the database would
22 be there, if not the data that informed the database
23 as to the particular ballots being built?

24 A. Yes.

25 Q. He then says: I was able to access and

1 download GEMS databases for at least 15 counties. Do
2 you see that?

3 A. I do.

4 Q. And do you have reason to believe that that
5 statement is not true?

6 A. I have no recollection of there being 15
7 GEMS databases for any purpose posted to that web
8 server for distribution to a county.

9 Q. They should -- they should not have been
10 there, correct?

11 A. They should not have been there.

12 Q. And you do not recall them being there.

13 A. I do not.

14 Q. Did -- okay. I'll come back to that
15 question.

16 He then says: These GEMS databases use
17 poor encryption allowing third parties to extract
18 user names and passwords from multiple databases. Do
19 you see that?

20 A. I do.

21 Q. Do you have any reason to doubt that?

22 A. I honestly do not know the level of
23 encryption within the databases, so I don't know
24 whether it would be considered poor or not poor.

25 Q. He then does, in fact, identify a training

1 video; do you see that?

2 A. I do.

3 Q. And it included a video?

4 A. Yes.

5 Q. Okay. And then do you see that he also
6 found pdfs of election day supervisor passwords? Do
7 you see that?

8 A. I do.

9 Q. And is that information that he would have
10 had access to?

11 A. We did post onto -- inside the county
12 folder password memos for Express Poll use.

13 Q. And that would have been accessible to --
14 to -- some of that -- Logan Lamb, in this instance?

15 A. They were inside the folder at the county
16 level.

17 Q. Inside the folder at the county level and
18 that folder was where?

19 A. That was on the web server.

20 Q. Okay. And then what are the Windows
21 executable and DLLs that he describes? Do you know
22 what those are?

23 A. Yes.

24 Q. What's the system data SQL Lite?

25 A. That is a DLL file that is placed on a

1 compact flash card for Express Poll that works in
2 combination with the EXP report.exe file that's also
3 listed.

4 Q. So those work together.

5 A. Those work together.

6 Q. He then says in paragraph 15 -- and again
7 I'm still at document 258-1, page 131 of the Federal
8 Court filing in page 6 of this declaration. In
9 paragraph 15, Mr. Lamb says that the Express Poll
10 units are specialized Windows PCs; is that correct?

11 A. Yes.

12 Q. Okay. And those Express Poll units are
13 specialized PCs that reside in the counties; is that
14 right?

15 A. Correct.

16 Q. Actually, it would be one in each poll
17 location, correct?

18 A. At least, yes.

19 Q. Okay. He then says: An attacker can
20 modify these files and affect the behavior of the
21 Express Poll units. If an attacker could modify
22 those files, they would affect the behavior of
23 Express Poll units, correct?

24 A. That's what it states.

25 Q. But do you have any reason to disagree with

1 that?

2 A. My question would be what files is he
3 referring.

4 Q. Okay. What -- what files with respect to
5 which if you did modify them would affect the
6 behavior of the Express Poll units at the polling
7 place?

8 A. The, the file that you would want to modify
9 in order to change how an Express Poll operates?

10 Q. Yes.

11 A. The only file that I have ever seen is a
12 resource file.

13 Q. What's a resource file?

14 A. It controls the buttons that an Express
15 Poll displays.

16 Q. Okay. When -- getting back to Exhibit 21
17 and the e-mails from Merrill King to you and then you
18 to Mr. Gay and others on August 28, 2016, did you or
19 your office make any attempt to determine what files
20 Mr. Lamb had downloaded?

21 A. I have a hard time recalling what all steps
22 we took at the process of this. I believe our first
23 step was to look and see if data was there, why it
24 was there that shouldn't be there. And then remove
25 said data to make sure it was no longer present.

1 And my recollection was that Executive
2 Director King then relayed to Mr. Dean to begin, you
3 know, working with KSU IT to harden the web server to
4 remove -- to strengthen its ability to hold those
5 data files in a secure manner.

6 Q. Did, did you determine what data was there?
7 Did you or your office determine what data was there?

8 A. My recollection is we didn't start looking
9 to see what was there. We just got rid of whatever
10 was there. That we removed it. It cleared the
11 folders.

12 Q. Did you keep a record of what was there?

13 A. I do not recall.

14 Q. You are not aware of any record of what --

15 A. I don't recall.

16 Q. Okay. Did you attempt to do any sort of
17 forensic work to see if you could check the files
18 that Mr. Lamb had downloaded?

19 A. I do not know.

20 Q. You said you just got rid of all the data.
21 Could you describe that?

22 A. My recollection is that the folders were
23 cleared of the data. The data still existed. The
24 data is still maintained within the Center, but the
25 folders were cleared of data so that they were no

1 longer available for any download.

2 Q. Okay. And so the web server was still
3 there. It was not made less accessible. It's just
4 the information on it was changed.

5 A. My recollection was that the data was
6 moved -- was removed. I don't know what Steven and
7 Merrill were doing with IT to begin strengthening of
8 the system. I just know they began working on
9 strengthening the system.

10 Q. Okay. So there's no -- as far as you know,
11 other than the declaration of Mr. Lamb, there's no
12 written record of what Mr. Lamb would have
13 downloaded; is that correct?

14 A. Yes, I do not know.

15 Q. Do you recall whether your office,
16 Mr. King, Mr. Dean, reviewed what was there that
17 would have been removed --

18 A. I don't know.

19 Q. -- to determine whether there was any
20 executable code on there?

21 A. I do not know.

22 Q. Do you know if any effort was made by your
23 office, Mr. King, Mr. Dean, to determine how long
24 those files had been on the system?

25 A. I do not know.

1 Q. Do you know if any effort was made to
2 determine how long prior to August 28 someone would
3 have had the same access to those files as Mr. Lamb
4 did in August of 2016?

5 A. I do not know.

6 Q. Let me go back to Exhibit 21, which is the
7 big collection of documents. Let me direct your
8 attention to page 181. 181 is a e-mail from you --
9 I'm sorry. 181, the e-mail starts on page 180 and
10 it's from Steven Dean, copies you. Do you see that?

11 A. I do.

12 Q. And it's dated August 29th. Do you see
13 that?

14 A. Uh-huh.

15 Q. Okay. And do you know what Drupal was?

16 A. I believe it is a website programming
17 software.

18 Q. And looking to Mr. Dean's third paragraph,
19 starting "This morning." Do you see where he says:
20 This morning we implemented a patch to disallow file
21 tree access by anonymous users. Do you see that?

22 A. I do.

23 Q. Was it your understanding that prior to the
24 implementation of that patch, file tree access was
25 available by anonymous users?

1 A. I would infer from his e-mail that it was.

2 Q. Okay. Do you see where he says in the next
3 paragraph: While we have denied access to the file
4 tree, we are -- we are currently -- we are having
5 trouble patching the ability for anonymous users to
6 access individual files directly without also
7 disallowing Drupal user access to those files. Do
8 you see that?

9 A. I do.

10 Q. So the problem there that they were having
11 is that making sure the right people could have
12 access and not the wrong people; fair to say?

13 A. Honestly, that's speaking language and such
14 that I do not know.

15 Q. Okay. Let me direct your attention to
16 Document 174. Let me direct your attention to an
17 e-mail from Mr. Moore. And who is Mr. Moore?

18 A. I believe Mr. Moore worked in KSU IT at the
19 time.

20 Q. Okay. His e-mail there says: The
21 authenticated scan completed last night and I will
22 share the results as soon as my current meeting
23 completes.

24 Do you know what authenticated scan is?

25 A. I do not know what they were doing at that

1 point in time, what IT office and Steven were
2 attempting to complete at that time.

3 Q. Let me just back up a little bit.

4 If you could -- I should have asked this
5 before, but after you received the forwarding of
6 your -- of the e-mail from Logan Lamb, describe for
7 me what you, Mr. Barnes did and what actions other
8 people in CES did with respect to what Mr. Lamb, the
9 information that Mr. Lamb conveyed to them. Could
10 you do that?

11 A. I was sitting in on the discussions
12 basically hearing what was going on. But the
13 operational work was being executed by Mr. King and
14 Mr. Dean, and Mr. Figueroa. I was being, you know,
15 updated on the work that they were doing, what they
16 were doing, the actions they were taking. I was
17 aware that they were working, but what those actions
18 were to harden the system, I couldn't speak to. But
19 I did relay information to KSU IT, based on my
20 position as the director, of my guys should be
21 contacting you to speak with these guys and I would
22 like to be on the ccs of this information.

23 One action that I did take in relation to
24 Mr. Lamb's initial one is I did reach out to KSU IT
25 director -- and I'm trying -- I'm drawing his name, a

1 blank, Steven. I can't think of his last name.

2 Q. Gay?

3 A. Yes, Steven Gay. And basically said, you
4 know, can you validate this individual because we
5 don't know if this is a bad actor or not. And
6 possibly could be a bad actor that we may need to
7 look into.

8 Mr. Gay came back and says, no, it appears
9 that Mr. Lamb is a -- is a credible security
10 individual. And then I think I responded back to
11 him, I said, understood. I think we have reached
12 back out to him to see, A, thank him for letting us
13 know about this issue so that we can begin tightening
14 our protocols to make sure that the system is not
15 penetrated in any ill fashion.

16 And then from that point forward, I sort of
17 left it in the hands of Mr. King and Mr. Dean to work
18 with KSU IT to get our web server more enforced.

19 Q. Is it fair to say that your role was in
20 operations in the sense of leading the effort to
21 build the ballots and do the election work, but
22 others were responsible for system security issues?

23 A. That would be correct.

24 Q. Okay. And, ultimately, Mr. King would have
25 been responsible for both your work and system

1 security for CES, correct?

2 A. That is correct.

3 Q. And that on the systems security side, it
4 would be a combination of people who worked at CES
5 and at KSU.

6 A. That would be correct.

7 Q. Okay. I had started this line of
8 questioning asking about an authenticated scan.

9 A. Uh-huh.

10 Q. Do you know if the authenticated scan was
11 retained?

12 A. I do not know.

13 Q. Do you know where something like that would
14 be retained, if it had been?

15 A. I do not know.

16 Q. Okay. Let me direct your attention to an
17 e-mail that starts on page 171 at the bottom of
18 Exhibit 21. And it's from you to Mr. Moore and
19 others dated August 31, 2016.

20 A. Uh-huh.

21 Q. And then the text of the e-mail starts on
22 the top of 172.

23 A. Uh-huh.

24 Q. If you look at the e-mail, sort of back up
25 a little bit.

1 A. Uh-huh.

2 Q. My sense of this is that, as the head of
3 the operational piece of CES, you were concerned
4 about the work that the technical people were doing
5 interfering with getting election out. Is that fair
6 to say?

7 A. At this time frame in August of --
8 August 31st of 2016, my head was primarily on the
9 production of 159 GEMS databases for the upcoming
10 Presidential election. Which balloting would have
11 been beginning -- absentee balloting would have been
12 beginning within 15 days of that date. So my prime
13 focus at that point in time was making sure we could
14 have a Presidential election in the State of Georgia.

15 Q. And we're so glad you did, I must say.

16 Now, how did the work that Moore and
17 Mr. Gay were doing the scans, how did that threaten
18 -- "threaten" may be too big a word, but how -- what
19 effect might they have had upon your actual
20 operations?

21 A. Based upon what I was being told through
22 meetings at the time, it was limiting the ability to
23 use the web server to push out those ballot proofs
24 for proofing purposes. We couldn't post anything to
25 that location for counties to pull down because they

1 were working to make the web server stronger.

2 So we were having to revert back to other
3 ways of getting ballot proofs to counties, physical
4 delivery as opposed to electronic delivery.

5 Q. Okay. The ballot proofs then were the
6 pdfs, correct?

7 A. Uh-huh.

8 Q. And tell me again how they were supposed to
9 be transmitted to the counties.

10 A. The counties would have been logging into
11 the web and pulling those pdfs down.

12 Q. And they're given some passcode or
13 something to --

14 A. Yes, counties have user name and password
15 privileges, yes.

16 Q. And are you familiar with the protocol that
17 the counties used to secure their passwords?

18 A. I am not.

19 Q. What did they have access to other than
20 their file with the PDF of the proofs of the ballots?

21 A. Once they signed on as a county user?

22 Q. Right.

23 A. We mentioned earlier about training videos.
24 Stuff of that nature.

25 Q. Anything else?

1 A. My recollection, I have very little
2 recollection of what all was on the website of 2016
3 now.

4 Q. What do they have access to now?

5 A. There is no website --

6 Q. Okay.

7 A. -- for logging into and pulling stuff down
8 now. The Secretary of State has set up a secured FTP
9 process that's maintained by SOS IT.

10 Q. What is SOS? It means secretary --

11 A. Secretary of State Information Technology.

12 Q. I'm sorry.

13 And how does secured FTP transmission work?

14 A. You would have to ask SOS IT that question.

15 Q. They tell you it's secure.

16 A. And I trust them.

17 Q. And through a secured FTP, is it your
18 understanding they get only what's sent to them?

19 A. That is my understanding, yes, is that the
20 county only has access to that county folder and no
21 other locations.

22 Q. And when did that, the change, when was the
23 change made from allowing the counties to log in with
24 the user name and password to get their proof file
25 and training video, on the one hand, and then

1 limiting it to just the proofed file transmitted
2 through an FTP?

3 A. Everything began being transmitted through
4 the Secretary of State's controlled environment in
5 spring of 2017.

6 Q. And that was -- that would have been before
7 the migration from CES, from KSU to --

8 A. Yes, yes.

9 Q. Before that change in terms of how the --
10 what the counties had access to, did the counties
11 have access to, for training purpose, a GEMS
12 database?

13 A. At some time we had placed a training GEMS
14 database to a county. To what county, I do not
15 recall. But a training database had been posted for
16 a county.

17 Q. But just let's say it's July, July 2016.

18 A. Uh-huh.

19 Q. And I'm a county -- I'm Richard Barron,
20 just to pick a name -- and I've got a user name and a
21 password and I log into the web server, what could I
22 download?

23 A. My recollection of what a county could
24 access from the web server once they logged into
25 their -- with their credentials was what had been

1 posted for them. But they also had access to another
2 page that showed the training videos, but they only
3 had direct access to what had been posted to their
4 folder.

5 Q. Did the training video include a GEMS
6 database itself?

7 A. The training video?

8 Q. Right. Or that folder or that module.

9 A. I don't recall. I don't recall.

10 Q. Okay.

11 Let me direct your attention to 169 and
12 that is of Exhibit 21. What was the fully working
13 clone that's referred to in the e-mail dated
14 September 7 that's in the middle of that page?

15 A. My recollection was that Mr. Dean was
16 building a new web server and working to, working
17 through the process of hardening that as ways of
18 testing those improvements.

19 Q. And did he build a --

20 A. I do not know to what point he completed.

21 Q. But your understanding, it wasn't
22 completed?

23 A. I do not believe it was finished.

24 Q. Okay.

25 A. But I know that they were working on it.

1 Q. Okay.

2 Let me direct your attention to 167. Here
3 Mr. Dean writes to Mr. Simms at edu -- at KSU, a copy
4 to yourself and others: Matt, we have the backup
5 server updated to Debbie and Jessie.

6 What is that? Or who is that?

7 A. I -- I believe it is a -- again, a software
8 program, but I do not know.

9 Q. Okay. And what's Apache?

10 A. Again, I believe that has to deal with
11 managing web processes, but I do not know.

12 Q. And what backup server is he referring to?

13 A. I don't know. I'm assuming it was that
14 clone previously referenced, but I don't know.

15 Q. What happened to that clone?

16 A. I do not know.

17 Q. Okay. But your assumption is the backup
18 server here is the clone that he was working on?

19 A. I would assume, yes.

20 Q. Okay.

21 Let me direct your attention to 164.
22 First, if you look at the bottom of the page, there's
23 a reference to the Unicoi server. What's the Unicoi
24 server?

25 A. My recollection of Unicoi, Unicoi was a

1 server that had been originally distributed to
2 Mr. King in his role as chair of the computer science
3 department, and it was a server that he used as part
4 of his professorial duties with Kennesaw State.
5 And when he relocated to the Center for Election
6 Systems, that particular device came with him.

7 Q. And what was put on the Unicoi server
8 relating to election?

9 A. I believe the -- that Unicoi box was the
10 box that Steven was using to build that clone, to put
11 that clone onto, was Unicoi.

12 Q. So the Unicoi, whatever else it had on it,
13 was the computer that he used to build, or start
14 building the clone.

15 A. That is my recollection, yes.

16 Q. And was the Unicoi server connected to the
17 Internet in any way?

18 A. I believe it was connected to the KSU
19 network, but I do not know if it was connected to the
20 outside world.

21 Q. Do you see where Mr. Moore says: The
22 serverelection.Kennesaw.edu shows, however, that a
23 outdated version of PHP may be running and may be the
24 reason 40-plus critical vulnerabilities are being
25 identified as relating to PHP?

1 Do you see that? 165 --

2 A. Oh, sorry. I do see that.

3 Q. And what's PHP?

4 A. I do not know.

5 Q. And do you know anything about this issue?

6 A. I -- only that I saw it in these e-mails
7 through cc.

8 Q. And do you know what was done about the
9 critical vulnerability?

10 A. I do not know.

11 Q. Okay. Let me direct your attention to 162.
12 162 is an e-mail dated March 1, 2017 from Andy Green
13 to Steven Gay. Do you see that?

14 A. I do.

15 Q. Did you receive a copy of that e-mail?

16 A. I believe it was forwarded to me in
17 subsequent other e-mails.

18 Q. Okay. Do you see where -- and Mr. Green
19 worked for Kennesaw, right?

20 A. That is my recollection.

21 Q. And do you see where in this e-mail he
22 states that he was able to verify the presence of the
23 vulnerability himself?

24 A. I do.

25 Q. And did you, after getting this, undertake

1 to determine why after Mr. Lamb had accessed files in
2 August, that still on March 1 someone was able to
3 access files in the fashion that Mr. Green describes?

4 A. I believe my first action upon these things
5 in communication with Mr. King the next day was
6 immediately taking the web server completely offline.

7 Q. Okay. I understand the action that you
8 took, which was to take -- you took the
9 elections.kennesaw.edu server offline?

10 A. Uh-huh.

11 Q. Or the server that had that domain. Is
12 that more accurate?

13 A. The box that had that domain was completely
14 disconnected from any network connections.

15 Q. And was it ever put back on?

16 A. I do not believe it was.

17 Q. Okay. And to get back to my question, I
18 understand the action that you took, but at that
19 time, are you aware of any effort to answer the
20 question, wait a minute, this was a problem we had
21 months ago, why wasn't anything done about it or
22 something to that effect?

23 A. I don't recall.

24 Q. Do you recall asking that question?

25 A. I honestly do not recall asking that

1 question.

2 Q. What about Mr. King, did he say, "Damn
3 it" --

4 A. That, I can't speak to what he thought, but
5 I don't know.

6 Q. What did he say?

7 A. I don't know what he said at that moment in
8 time that he got the e-mail. I don't know.

9 Q. Did you -- did you sense any reaction in
10 writing or in any kind of communication from anybody
11 at KSU or CES as to some concern that the
12 vulnerability described by Mr. Green who was employed
13 by Kennesaw apparently had been in place for many
14 months?

15 A. My recollection of that day was just, you
16 know, we have got to resolve this. We have got to
17 fix, whatever this is, it has got to be fixed. That
18 was the main thought was their thought -- there was
19 no thought in my head about going back and putting
20 pieces all back together again. I don't know what
21 thoughts were had by others in the Center at that
22 time.

23 MR. BROWN: Okay. Why don't we take a
24 five-minute break if we could. Is that all
25 right?

1 THE VIDEOGRAPHER: The time is 11:49 a.m.
2 We are now off the record.

3 (WHEREUPON, a recess was taken.)

4 THE VIDEOGRAPHER: The time is 11:58 a.m.,
5 and we are back on the record.

6 Q. (By Mr. Brown) Mr. Barnes, a couple of
7 follow-up questions.

8 Where is Mr. Dean today?

9 A. Last I know is he is still employed by
10 Kennesaw State University. In what capacity, I do
11 not know.

12 Q. Was the GEMS database, the training
13 database, was it encrypted in any way?

14 A. I don't recall.

15 Q. And what was it called? What would be the
16 file name of the training? Do you know?

17 A. I don't recall.

18 Q. I had asked you if there was a record of
19 what was on the server --

20 THE VIDEOGRAPHER: Hold on.

21 (WHEREUPON, there was a discussion off the
22 record.)

23 THE VIDEOGRAPHER: The time is 12 o'clock
24 p.m. We are back on the record.

25 Q. (By Mr. Brown) I want to take us back to

1 after Mr. Lamb had notified CES of what he had found.
2 I had asked you some questions. You had testified
3 about the records that were taken off of the, the web
4 server at the time.

5 A. Uh-huh.

6 Q. Do you recall?

7 A. Uh-huh.

8 Q. I had asked you was there any record made
9 of what was taking -- taken off. Do you recall that?
10 And you said -- I think you said you weren't aware of
11 one.

12 A. Uh-huh.

13 Q. Fair enough?

14 A. Yes.

15 Q. I just want to make sure. Was there a
16 electronic record of what was taken off, not just a
17 paper record?

18 A. As in maintained by the device itself?

19 Q. Right.

20 A. I mean, I don't know. All I could speak to
21 is what the files that were in the county folders.
22 That's what was taken off, but those files, copies of
23 those files still resided on, because they were being
24 used for Express Poll distribution purposes. All of
25 those files, those output files were still maintained

1 on the Epic server of, you know, data that had been
2 made available to the county for that use. So the
3 files still existed. They were just no longer in the
4 folder on that web server.

5 Q. But in terms of getting a snapshot of what
6 Mr. Lamb had access to or what would have been on the
7 web server at the time he had access, you are not
8 aware of a snapshot.

9 A. I'm not.

10 Q. In any electronic or paper form.

11 A. I'm not.

12 Q. Okay.

13 Okay. Let me direct your attention to page
14 29 of Exhibit 21. And just to get us back in terms
15 of the time frame, a couple of days before Mr. Green
16 had e-mailed of his verification of the
17 vulnerability. Are you with me?

18 A. Yes.

19 Q. And here we are on March 3rd, two days
20 later. Is the document that's at -- Bates labeled
21 29, is that written by you?

22 A. It is.

23 Q. And what does it describe?

24 A. It describes files that were present, the
25 type of files that were present on

1 elections.Kennesaw.edu at that time on March 1st.

2 Q. Okay. And you are using Appling County as
3 an example because it's first in the alpha,
4 alphanumeric organization, correct?

5 A. Yes, that's how I organized it.

6 Q. Okay. And so what you are describing is
7 using Appling County as an illustration of what would
8 have been on the elections.Kennesaw.edu server at the
9 time Mr. Green confirmed the vulnerability, correct?

10 A. Yes, I used Appling County as like the
11 primer to get to what was, you know, what was the
12 file at the end of the web string.

13 Q. And so in the Appling County folder, you
14 had a zip file with audio files.

15 A. Well, I don't know if I had that in the
16 Appling folder, but let's say the first county folder
17 was Appling and in a county folder would be the
18 following information if it was present in that
19 folder.

20 Q. Okay.

21 A. So there would have been, there would have
22 been an audio.zip file. So that file would have
23 contained candidate -- how, how we pronounced
24 candidate names within that county that were -- that
25 were particular to that county, local races. Also

1 any local questions, local race headers.

2 Q. And then what is the -- if you go down
3 to -- almost to the bottom you will see the ABS file
4 poll data.DB3.

5 A. Uh-huh, uh-huh.

6 Q. Do you see that?

7 A. Uh-huh.

8 Q. What is that?

9 A. That file was for Express Poll use. And it
10 was a data file to be loaded to a compact flash card
11 that would then be placed into an Express Poll that
12 contained no voter information at all. Was just a
13 list of the various district combos and their
14 associated ballot styles that Express Poll could
15 interpret and create a needed voter access card for
16 advance in-person absentee voting.

17 Q. And you see in the next paragraph the
18 file.resources?

19 A. Uh-huh.

20 Q. Do you see that?

21 A. I do.

22 Q. And is that the same file that you
23 discussed before about when we were talking about
24 what damage might -- how you could --

25 A. That's the file I described as -- this is

1 the -- this is the file that controls what buttons
2 you see on the Express Poll.

3 Q. Okay. And then on the next page under
4 Cherokee County -- why do you switch to Baldwin and
5 Cherokee County in sort of illustrative list here?

6 A. I do not recall why.

7 Q. Okay. So these are all files that were on
8 the election.edu -- I'm sorry, elections.Kennesaw.edu
9 site that Mr. Green described was vulnerable,
10 correct?

11 A. These were file types, yes.

12 Q. File types?

13 A. Yes.

14 Q. And they would have included GEMS
15 instructions pdf also?

16 A. Yes. Looks like that was -- that was in a
17 manual on how to use GEMS.

18 Q. Okay.

19 Okay. Turn with me to page 129. And does
20 this reflect the action taken to shut down the
21 server?

22 A. I believe this is in response to the
23 Unicoi.

24 Q. Okay. And so this is not shutting down
25 the -- well, two servers here we are talking about, I

1 guess, that is web facing. One is the Unicoi server
2 that Mr. King had that used to be for his use as a
3 professor, correct?

4 A. Correct.

5 Q. And the other one is the
6 elections.Kennesaw.edu server, correct?

7 A. Correct.

8 Q. And at some point both -- were both of
9 those disconnected from the Internet?

10 A. I believe the web, the
11 elections.Kennesaw.edu was immediately disconnected
12 on that March 1st, March 2nd time frame. And that
13 the Unicoi server, from my recollection, was never
14 put into an outward-facing IP, but it was placed on
15 the KSU network. And then when KSU IT saw that box
16 and did a scan, they immediately said make sure it's
17 taken off now.

18 Q. Do you know what from the scan --

19 A. I do not know.

20 Q. Okay. And do you know where that scan
21 would be now?

22 A. I do not know.

23 Q. And how many users are on the KSU network?

24 A. I do not know.

25 Q. But thousands?

1 A. I do not know.

2 Q. But, I mean, it's for the whole university.

3 A. I do not know how KSU organizes its
4 network.

5 Q. Turn with me to page 91. And let me direct
6 your attention to the e-mail at the bottom of the
7 page from you to Steven Gay, dated March 15th.

8 A. Uh-huh.

9 Q. Now, here you -- this is the bottom of page
10 91 of Exhibit 21. You say: We would like to
11 retrieve certain records from elections.Kennesaw.edu
12 that support our daily office activities.

13 Do you see that?

14 A. I do.

15 Q. And I take it you didn't have access to it,
16 but you needed access to it; is that correct?

17 A. Correct.

18 Q. Okay. And were you given access to this?

19 A. We were.

20 Q. Okay. But it was temporarily not
21 retrievable because of security work that was being
22 done?

23 A. We didn't have possession of the box at
24 all.

25 Q. Who had possession of it?

1 A. KSU IT.

2 Q. Okay. And why did KSU IT have it?

3 A. They, upon the March 2nd -- March 1st,
4 March 2nd activity stepped in and took possession of
5 that server for their own security assessment. And
6 it literally was removed from the facility and taken
7 to a KSU IT secure storage.

8 Q. Okay. And so you didn't have your server,
9 you didn't have your web server?

10 A. The web server was taken from our building
11 and put in possession of KSU IT.

12 Q. So March 15th, you're saying, I have got to
13 do some work here, got to copy some files, basically,
14 correct?

15 A. I needed access to files that were being
16 stored on that server.

17 Q. Turn with me to page 62. In that -- in the
18 e-mail in the middle of the page identifies an SOS
19 investigator. Do you know who that investigator was
20 and what they were doing?

21 A. 62?

22 Q. Yes.

23 A. Let's see.

24 Q. Yes, it's in the middle of the page.

25 A. I do not recall what that particular SOS

1 investigator was looking at, at the time. We -- we
2 communicated with SOS investigators a lot in their
3 role with investigating issues brought before the
4 state election board, and they would customarily ask
5 for ballots from previous election.

6 Q. Did the investigator from the Secretary of
7 State undertake any sort of investigation into the
8 security of the CES system?

9 A. Not that I'm aware of.

10 Q. Okay. Do you recall the FBI taking
11 possession of some of your gear?

12 A. I -- I recall the FBI being contacted.
13 What the FBI did in possession in taking such forth,
14 I don't know what they did and when they particularly
15 did it, but I remember the FBI being brought in.

16 Q. And what is your understanding of what they
17 took?

18 A. My understanding is they took a full image
19 of the elections.Kennesaw.edu server.

20 Q. And they took the image of it?

21 A. That's my understanding. I don't know if
22 they took physical possession of
23 elections.Kennesaw.edu at some time. I don't know.

24 Q. And what did they do with the image?

25 A. They reviewed the image. I don't know what

1 they did, but they reviewed the image as part of
2 their investigation.

3 Q. Okay. And then the server itself, where
4 did it go?

5 A. The server was property of Kennesaw State
6 University. So it stayed with -- after the FBI
7 was -- concluded their investigation, that server was
8 retained by Kennesaw State University IT. That box
9 never came back to CES.

10 Q. Okay. And then did you build another?

11 A. No, we did not. KSU did all web services
12 for the Center after March 2nd, 2017.

13 Q. Do you know what KSU IT did with that web
14 server?

15 A. I don't know in what condition that web
16 server currently stands.

17 Q. Is it still out there?

18 A. I do not know.

19 Q. Do you know if anyone took a picture of
20 what the FBI took a picture of?

21 A. I do not know.

22 Q. So if you wanted to find out what was on
23 that web server today, it would be beyond your reach;
24 is that correct?

25 A. It would be beyond my reach, yes.

1 Q. Okay. It would either be at KSU IT or with
2 the FBI?

3 A. That is my understanding, yes.

4 Q. Now, did you -- do you recall in the --
5 later in 2017 receiving any notice from the Attorney
6 General that we have been sued, you need to retain
7 all your records, don't destroy anything or anything
8 to that effect?

9 A. I know that we got notification from legal
10 counsel at KSU through e-mail to us saying, you know,
11 hold onto anything you have got.

12 Q. And when did you get that?

13 A. I don't recall the day that we got that.

14 Q. But in the 2017 time frame that --

15 A. Yes. We -- yes. I think there were
16 multiple lawsuits filed in 2017. So, yes.

17 Q. And -- but was that by e-mail or --

18 A. I don't recall how we got notification.

19 Q. And did you hold onto everything you had?

20 A. All the documents that we had within the
21 Center for Election Systems were held.

22 Q. What about the data?

23 A. All the data that we had within CES was
24 held.

25 Q. Okay. What about the servers, were they

1 kept?

2 A. All of the hardware that was in the
3 building stayed in the building, yes.

4 Q. And what was -- at the time you received
5 notification of the lawsuit, what was within your
6 control? Ballot builder?

7 A. Ballot builder was in our control. Epic
8 server was in our control. We had no outward-facing
9 servers of any sort in our control or in our
10 possession.

11 Q. And the individual boxes that your ballot
12 builders use --

13 A. They were still in-house, yes.

14 Q. And have those been -- those are still
15 there?

16 A. Those have -- I believe when the Center for
17 Election Systems transitioned from Kennesaw State to
18 the SOS, that Kennesaw State transitioned all of that
19 hardware over to SOS and that it is still held by
20 SOS.

21 Q. Okay. Let me hand to you a couple of pages
22 from Judge Totenberg's decision dated September 17th,
23 2018. And this is the judge's opinion based upon
24 allegations in the plaintiff's complaint. And I want
25 to see what you know about these allegations, if

1 anything.

2 If you look on the second page of what I
3 have given to you, and this is 334 F. Supp 3rd 1303.
4 And the jump side is 1310. The order says: But on
5 July 7, 2017, four days after this lawsuit was
6 originally filed -- and I'm reading from the second
7 column.

8 A. Uh-huh.

9 Q. Toward the top. Do you see that?

10 A. Yes.

11 Q. But on -- to start over.

12 But on July 7, 2017, four days after this
13 lawsuit was originally filed in Fulton Superior
14 Court, all data on the hard drives of the
15 University's elections.KSU -- Kennesaw.edu server was
16 destroyed.

17 Do you see that?

18 A. I do.

19 Q. And that would have been after -- best of
20 your recollection, after the Attorney General had
21 circulated a notice to CES at least to hold onto
22 everything, hold onto everything you got, right?

23 A. Uh-huh.

24 Q. Is that a yes?

25 A. My recollection of the event is yes, that

1 we had received notification from -- CES had received
2 notification from legal counsel at KSU to retain all
3 information.

4 Q. Did that come from Jeff Milsteen probably?

5 A. He was legal counsel for KSU, so, yes.

6 Q. So Milsteen tells CES hold onto everything
7 you got, right?

8 A. Uh-huh.

9 Q. Do you know if he sent the same thing to
10 KSU?

11 A. I do not know.

12 Q. Do you know that he did not?

13 A. I do not know.

14 Q. Just he might not have?

15 A. I don't know what communications.

16 Q. But at -- at that time when you got it, not
17 suggesting that you had to, but you didn't say to
18 Kennesaw, you have got my gear that was accessed,
19 don't do anything with it, did you?

20 A. No.

21 Q. Okay. Do you have any reason to believe
22 that Kennesaw itself, apart from CES, did not receive
23 that notification --

24 A. I don't know.

25 Q. But in any event, after you got the

1 notification to hold everything, Kennesaw IT
2 destroyed that server, correct?

3 A. Kennesaw ID -- Kennesaw IT followed their
4 protocol for doing whatever with servers in this
5 instance, but I -- I don't -- I don't know what they
6 did, but they followed their protocol. That's what
7 was relayed to us.

8 Q. And your understanding was that protocol
9 involved wiping the system.

10 A. That's my understanding.

11 Q. Okay. And do you know if Kennesaw took a
12 picture of what it destroyed?

13 A. I do not know.

14 Q. Okay. The next sentence of Judge
15 Totenberg's order says: And on August 9, 2017, less
16 than a day after this action was removed to this
17 court, all data on the hard drives of a secondary
18 server which contains similar information to the
19 elections.Kennesaw.edu server was also destroyed.

20 Do you see that?

21 A. I do.

22 Q. Was there a secondary server?

23 A. I do not know what that speaks of.

24 Q. Okay. Were you -- were you aware of --
25 could this have been the Unicoi server; do you know?

1 A. I don't know.

2 Q. So you don't know what was destroyed on
3 August 9?

4 A. No, I do not.

5 Q. And same question as before: You don't
6 know if a picture was taken of what was destroyed?

7 A. I do not know.

8 Q. So just to wrap all this up, as far as you
9 know, there is no record of what Kennesaw destroyed
10 either -- on either occasion, as far as you know?

11 A. That's -- I do not know. As far as I know,
12 yes, I have no knowledge.

13 Q. Right. You couldn't -- you couldn't find
14 it.

15 A. I couldn't find it.

16 Q. Okay.

17 Let me hand you what will be marked as
18 Exhibit 22.

19 (Plaintiffs' Exhibit 22, Diebold Election
20 Systems, Inc. 2005 GEMS 1.18 User's Guide, 12.4
21 Challenge Board, marked for identification.)

22 Q (By Mr. Brown) Mr. Barnes, you have seen
23 GEMS user's guides before; is that right?

24 A. I have.

25 Q. And you will notice that this one is dated

1 2005. Do you see that?

2 A. Uh-huh. Uh-huh.

3 Q. And do you have a user's guide that's newer
4 than that?

5 A. I don't know if I have one newer than this
6 or not.

7 Q. This particular exhibit relates to the
8 challenge board. Do you see that?

9 A. I do.

10 Q. And what's the challenge board?

11 A. That is a function in the election
12 management system that we do not use in the State of
13 Georgia.

14 Q. Why don't you use it; do you know?

15 A. It is -- it's a tool within the database we
16 don't use.

17 Q. Okay. Let me direct your attention to page
18 12.13 of Exhibit 22. Let me just ask you this: Does
19 this look like a GEMS database user's guide to you?

20 A. It does.

21 Q. Might be dated?

22 A. Correct.

23 Q. And looking at page 12-13, what would
24 you -- is this a -- is this a table that we are
25 looking at, could you call it that?

1 A. Yes, it appears to be a table.

2 Q. Okay. And do you see where it deals with
3 challenged voters there in the middle?

4 A. Yes.

5 Q. It has a voter ID column; do you see that?

6 A. I do.

7 Q. And what's a voter ID?

8 A. I don't know.

9 Q. Don't know?

10 A. Don't know what that number is.

11 Q. Is there a voter ID column that's used --
12 well, field, I guess, that's used in other
13 applications within GEMS?

14 A. I -- I do not know.

15 Q. Do you know if the State used to use a
16 challenge board within your tenure or they just
17 never, as far as you know, never used it?

18 A. I'm trying to recall when the State first
19 started doing in-person advanced voting on DREs.
20 There was a operation used that may have then
21 involved the challenge board, but I don't know if it
22 involved the challenge board.

23 Q. And just for the record, I'm going to get
24 you to identify Exhibit 23.

25 (Plaintiffs' Exhibit 23, Diebold Election

1 Systems, Inc. 2005 GEMS 1.18 User's Guide, 2.3
2 Deleting a Database, marked for identification.)

3 Q (By Mr. Brown) And just for the record,
4 does Exhibit 23 look like other pages from a GEMS
5 user's guide?

6 A. It does.

7 Q. And what the GEMS user's guide and what
8 GEMS in general does is allow the ballot builder to
9 go through a particular election and configure all
10 the variables that go into building the ballot,
11 correct?

12 A. That is correct.

13 Q. And the way it's configured is a series of
14 different queries or options that the ballot builder
15 will take to configure the election correctly,
16 correct?

17 A. Correct.

18 Q. And the ballot builder will do this
19 exercise for every single ballot combination -- or
20 ballot -- I want to use the right words.

21 A. What a ballot builder does in building
22 their database is first set the -- you know, the
23 styles of the ballot. Is it going to be a
24 three-column ballot or name of the -- name of the
25 election, what -- are you using optical scan ballots,

1 are you using touch screen ballots. What the font
2 sizes are going to be in play for candidate names.
3 What coloring may be appearing on the ballot and then
4 touch screen display. Setting up sort of like the
5 framework of the database.

6 And then it's a matter of entering in the
7 political districts and their subdistricts. The
8 precincts and their district combos, the polling
9 locations and relating those factors.

10 Q. Will they -- will they start the exercise
11 from step one for each ballot or will there be a
12 template per county that gets copied into the next
13 ones?

14 A. The -- what normally transpires is the
15 database that was used in the preceding election is
16 sort of a start point where previous election
17 information districting races and such are removed
18 and then a new database is built from that point
19 forward.

20 Q. So it might contain some information from
21 the previous one.

22 A. It might, yes.

23 Q. Okay.

24 Let me show you what will be marked as
25 Exhibit 24.

1 (Plaintiffs' Exhibit 24, Ballot image
2 printout from GEMS computer, marked for
3 identification.)

4 Q (By Mr. Brown) Can you identify Exhibit 24?

5 A. It appears to be a ballot image printout
6 from the GEMS computer.

7 Q. And can you tell looking at it what county
8 this would have come from?

9 A. I don't see a county designation on it. I
10 see a precinct designation.

11 Q. So if you knew where Red Oak was, you would
12 know what county it was?

13 A. Yes, I could -- I could -- I could
14 determine, yes.

15 Q. Okay. And what is a ballot image report
16 used for?

17 A. A ballot image report can be generated from
18 GEMS to show what was captured by specific DRE
19 machine.

20 Q. And what was captured by a specific DRE
21 machine for a particular voter?

22 A. Not for a particular voter, but a ballot
23 cast.

24 Q. What's the difference between a particular
25 voter and for ballot cast?

1 A. When we cast a ballot, there's not an
2 identifying element that's connected to the ballot at
3 the time of cast. It is simply ballot style. And
4 when the ballot style, when the touch screen hits
5 cast, when you hit cast vote on the touch screen, it
6 then assigns a numeric value to the collection of
7 data it just received from that interaction.

8 Q. And the numeric value is then associated
9 with the ballot, not with the voter?

10 A. Correct.

11 Q. And how is the numeric value generated?

12 A. How it generates a random number, I don't
13 know how it generates, but a random number is
14 assigned to that at the time the ballot is cast.

15 Q. It's by random number generator rather than
16 sequence; is that your understanding?

17 A. Right.

18 Q. And then that random number then is stuck
19 to, for lack of a better expression, that cast
20 ballot; is that right?

21 A. That would be correct, yes.

22 Q. The -- this particular printout does not
23 show a voter SN; do you see that?

24 A. I do.

25 Q. Why is there a field for a voter SN?

1 A. I do not know.

2 Q. Is there an option in GEMS to show the
3 voter SN there?

4 A. I do not know.

5 Q. And the voter SN would be the way to
6 identify a voter?

7 A. I do not know.

8 Q. So it could be that if you configured the
9 report differently, the ballot image report could
10 identify the voter; is that right?

11 A. I have never seen a way to configure the
12 report.

13 MR. BROWN: Let's take a break for a
14 second.

15 THE VIDEOGRAPHER: The time is 12:34 p.m.
16 We are off the record.

17 (WHEREUPON, a recess was taken.)

18 THE VIDEOGRAPHER: Stand by.

19 The time is 12:35 p.m. We are back on the
20 record.

21 Q. (By Mr. Brown) You testified that the
22 voter -- do you know what the SN would stand for?

23 A. I do not.

24 Q. That blank is not used now, as far as you
25 know?

1 A. As far as I know now, I do not know why
2 that's there.

3 Q. Okay. And do you know if that was used
4 back in, earlier in the 2000s when there was a
5 challenge procedure available? Do you know if that
6 might have been used then?

7 A. I don't know if that number correlates back
8 to that position.

9 Q. Okay. Looking at Exhibit 24. Do you see
10 any personal information on 24?

11 A. I do not.

12 Q. Do you see any private or sensitive
13 information on here?

14 A. I see the vote recorded.

15 Q. Is there -- would disclosing this publicly
16 present any sort of security risk that you know of?

17 A. I do not believe.

18 Q. Okay.

19 Let me hand to you what has been marked --
20 what will be marked as Exhibit 25.

21 (Plaintiffs' Exhibit 25, Ballot image
22 report from a GEMS computer, marked for
23 identification.)

24 Q (By Mr. Brown) And what is Exhibit 25?

25 A. It is also a ballot image report from a

1 GEMS computer.

2 Q. And why does -- why is 25 different than
3 24?

4 A. When you are creating a record from the
5 ballot view section, there is a check box that by
6 default is unchecked. If it remains unchecked, then
7 the image that generates only shows the selections
8 that the voter made. If it is -- if there is a check
9 mark placed in that box, then it will produce an
10 image that shows the selection that the candidate
11 made per race and all other candidates listed.

12 Q. So here this appears to be a Atlanta city
13 council race; is that right?

14 A. It appears to be, yes.

15 Q. And the first page just shows that an
16 unknown voter voted for Mr. Amos, correct?

17 A. Correct.

18 Q. And the -- is the ballot serial number, is
19 that probably what SN stands for?

20 A. That would be my guess, yes.

21 Q. And is that the random-generated number
22 there?

23 A. That -- yes.

24 Q. Okay. Then it -- turn in the page in
25 Exhibit 25, here is another ballot from a --

1 hopefully a different voter also voting for Mr. Amos.

2 A. Uh-huh.

3 Q. And then these are just examples, but same
4 race, just different ballot serial numbers, correct?

5 A. Correct.

6 Q. Now, if -- you testified that when the cast
7 vote button is mashed, that the system generates a
8 number that goes with the cast ballot. And to your
9 testimony, the identity of the voter is lost forever.
10 Fair enough?

11 A. Uh-huh.

12 Q. As far as the system knows, correct?

13 A. I don't believe that it ever knew who the
14 voter was to begin with.

15 Q. Well, they would know -- they would know --
16 wait. Is that right? The voter gets a yellow card,
17 right?

18 A. The voter checks in on Express Poll. The
19 record is marked as participating. And then a voter
20 access card is created containing a code that tells
21 the DRE what ballot style to display.

22 Q. But that card does not identify the voter
23 either?

24 A. Correct.

25 Q. Okay. So an anonymous person holding an

1 anonymous yellow card -- I say "yellow," but you know
2 what I'm talking about, the card that goes into the
3 DRE machine, correct?

4 A. Uh-huh, yes.

5 Q. The machine doesn't know who the voter is,
6 right?

7 A. Correct.

8 Q. The voter hasn't told them; is that -- is
9 that right?

10 A. The voter presented themselves with their
11 ID to the poll worker, was found to be an eligible
12 participant. And then they create a voter access
13 card that tells the -- tells the DRE what blank
14 ballot image to display for that voter.

15 Q. For that voter as a class of people who get
16 that ballot style, correct?

17 A. Correct. That voter is part of a district
18 combo value. That district combo value is the
19 identifier on the card that tells the device what
20 ballot to show.

21 Q. Is there -- are you aware of a method of
22 assigning the voter's identity onto the yellow card
23 that the voter is given?

24 A. I am aware of when the State started doing
25 in-person absentee balloting, I believe in 2003, 2004

1 I think. 2003, 2004. That due to statute, an
2 absentee ballot at the time of casting could not be
3 counted. It had to be held.

4 But the State wanted to use DRE equipment
5 to -- for in-person absentee voting because all
6 ballot styles could be assigned to a DRE. So that
7 the State decided to use the feature in the system,
8 the challenged voter feature, which allowed the --
9 during advanced voting allowed the user to create a
10 voter access card, and at the time of creating the
11 voter access card could put a numeric value of that
12 card. And then that numeric value was placed in the
13 record as being for Voter X, Y or Z.

14 And then the voter access card would be
15 placed into the touch screen. The ballot would be
16 cast, but it would not be counted. It would be sort
17 of held in an electronic envelope and the electronic
18 envelope had that numeric value on top of it. Very
19 similar to how an absentee ballot when it's sent back
20 in has the voter's identification on it, but the
21 ballot is contained there within.

22 And until the ballot was accepted on the
23 touch screen or not, it sort of stayed in a purgatory
24 state. You just knew that there was a ballot there,
25 the content you did not know. You just knew that

1 there was a ballot there that just had to be
2 accepted.

3 Q. So for legal reasons, the vote could be
4 made and accepted by the poll office, but couldn't
5 technically be counted until election day; is that
6 what it was?

7 A. Legally, the -- the absentee voter could
8 cast their ballots, but the way the statute was
9 written for advanced vote -- absentee voting at the
10 time is that a ballot could not be counted until end
11 of the close of the polls on election day. That
12 statute got changed, I believe, in 2007.

13 Q. Why was it necessary to assign a voter
14 identity to a ballot that was cast and held during
15 that time period?

16 A. The in-person absentee was absentee voting.
17 And there was clear statute on the books in relation
18 to how absentee ballots had to be maintained. And
19 statute said that if absentee ballot is returned that
20 it is held and not opened until close of polls on
21 election day. And then the ballot would be extracted
22 from the signed envelope and then counted.

23 So the State interpreted the legislative
24 intent as we have to hold these ballots in that
25 state. And I believe the mindset was that if a voter

1 came in and voted in absentee balloting under the
2 statute but then passed away before close of polls on
3 election day, the election office would be notified
4 of that death and then they would have the ability to
5 go back in, find that ID number, and then the ballot
6 is there, but it would not be accepted.

7 Q. Is there then functionality in either the
8 Express Poll book system or the GEMS system to assign
9 and keep a voter identity attached to a cast ballot?

10 A. I'm not aware of an operation within the
11 Express Poll. The DRE, if it's used to create a
12 voter access card, there is a way to assign it as a
13 challenged voter access card and assign a numeric
14 value.

15 Q. And so if you did through the challenge
16 vote process the DRE, the GEMS system would know who
17 cast that vote.

18 A. They would be -- I assume there would be a
19 number tied to it. Who it was, I wouldn't know.

20 Q. In configuring a ballot, the ballot
21 building process, is there an option for allowing the
22 DRE to retain the identity of the voter?

23 A. Say again.

24 Q. When you are building a ballot, could you
25 turn on or off the ability of the DREs to tag an

1 individual voter to a cast ballot?

2 A. I do not believe there is a toggle
3 on-and-off switch in GEMS for that action.

4 Q. Okay.

5 Do the smart cards now have a unique number
6 assigned to a ballot?

7 A. The -- what information is placed directly
8 onto the smart card, I don't know the direct
9 information. I can only speak to it in the operation
10 that is taking place.

11 The DRE device within a polling location
12 has a associated number of district combos with
13 correlating balance styles connected thereto. The
14 voter access card tells the DRE machine what district
15 combo value the voter is connected to based upon the
16 Express Poll creating the voter access card. And
17 then the DRE knows that if that voter is combo 203 in
18 this poll location, that they are eligible for ballot
19 style one.

20 Q. Okay. In Express Poll book piece of the
21 process.

22 A. Uh-huh.

23 Q. The poll worker would retain or record the
24 serial number of a -- of the smart card that a
25 particular voter got?

1 A. No.

2 Q. Okay. So if I go up to vote, and say I'm
3 Bruce Brown, I live in Morningside, I want to vote,
4 they give me a card, there's no record made of which
5 card I got; is that right, as far as you know?

6 A. That's correct.

7 MR. BROWN: Okay. Let's take a break for
8 lunch.

9 THE VIDEOGRAPHER: The time is 12:49 p.m.
10 We are now off the record.

11 (WHEREUPON, a recess was taken.)

12 THE VIDEOGRAPHER: The time is 1:55 p.m.,
13 and we are back on the record.

14 Q. (By Mr. Brown) Mr. Barnes, we are back from
15 a lunch break.

16 Let me hand to you what we are going to
17 mark as Exhibit 26.

18 MR. BROWN: And for the record, I do not
19 have copies of this, but Exhibit 26 is simply a
20 handwritten page that takes some information
21 from document requests that we served upon
22 Fulton County. And the purpose of this is
23 simply to ask the witness some questions about
24 some numbers that appear on the DRE screen.

25 And so this exhibit simply says, Fulton,

1 May 22nd, 2018 and then the precinct number.

2 And then it gives two specific numbers that we
3 believe appear on the screen. So I'm going to
4 ask about those, but I don't have a copy.

5 Q (By Mr. Brown) Let me hand you what is
6 Exhibit 26. I just have a few questions on that.

7 (Plaintiffs' Exhibit 26, Handwritten page,
8 marked for identification.)

9 Q (By Mr. Brown) Mr. Barnes, I hand you 26
10 which I have described. It has two numbers that I
11 will represent to you -- you don't have to believe
12 it, but I will represent to you, appeared on the DRE
13 screen after a voter voted. And do you know what
14 those numbers would be or what they would be for?

15 A. I do believe so, yes, sir.

16 Q. And what are they for?

17 A. The 848 number is a district combo value.
18 The 07H number is the precinct. And the 66 is the
19 ballot ID number, the ballot style.

20 Q. It's the, the identification of the style,
21 not of the -- not of the voter or anything?

22 A. Correct. It is the style. Yes. Ballot
23 style 66.

24 Q. Let me go back to another question that I
25 asked you and I wasn't sure about your response.

1 The smart card that the voter gets from --
2 after he -- before -- that he puts into the DRE
3 machine; are you with me?

4 A. Uh-huh.

5 Q. Is the -- is there any kind of
6 identification on the smart card that would link that
7 card to the voter?

8 A. No, sir.

9 Q. Does the registration official keep any
10 kind of record manually or electronically at their
11 desk that would link the smart card to the voter?

12 A. The -- there's nothing collected manually.
13 The Express Poll creates a transaction record. The
14 transaction record indicates the voter ID of --
15 that's in action, the voter, that's how they
16 recognize the voter is through the voter ID,
17 registration number of the voter. And part of that
18 transaction record outlines what ballot type the
19 voter was given. It outlines whether they voted the
20 Republican ballot or the Democratic ballot, if it's a
21 primary, and what ballot style they were issued and
22 that's recorded in the transaction record.

23 Q. And that's so that you can't vote twice,
24 right?

25 A. The transaction record keeps a record of

1 who has been issued a voter access card and what
2 ballot style they were issued in correlation to their
3 associated district combo value.

4 Q. Is the -- is there any way to know, based
5 upon that information, which smart card he or she
6 received?

7 A. No.

8 Q. Do the smart cards have a unique
9 identifier?

10 A. The smart cards do not have a unique
11 identifier.

12 Q. So there's nothing on the smart card that
13 says I am 45645?

14 A. That would be correct.

15 Q. Okay. Turn, if you will, in the big
16 exhibit, which is 21, I believe, to Number 110. Are
17 you with me?

18 A. Yes, sir.

19 Q. Have you seen the document that is
20 reproduced at Bates label 110 through 113 before?

21 A. I believe this is a report written in
22 conjunction with KSU IT department and the Center for
23 Elections.

24 Q. And did you have a role in preparing this?

25 A. In my role as director for the center, I

1 would have been involved in some capacity. I'm just
2 trying to -- I'm trying to recall that capacity.

3 Q. And who -- was there a person who was the
4 primary author of this or under whose name that this
5 went out?

6 A. I believe it was written by Steven Gay.

7 Q. And I may have asked you this, but where is
8 Mr. Gay now?

9 A. I -- I don't know if he is -- excuse me. I
10 do not know if he is still CIO -- excuse me, CIO or
11 with KSU IT currently.

12 Q. Okay.

13 A. He previously was at the time. I do not
14 know if he is still there or not.

15 Q. Okay. Now, the -- if you look under
16 Actions Taken, do you see that?

17 A. Yes, sir.

18 Q. It says: Within an hour of initial
19 contact, the vulnerability was confirmed. But the
20 initial contact was actually Mr. Lamb, right, which
21 was months before?

22 A. This -- this document is only pertaining to
23 the incident that happened on March 1st as the
24 document indicates.

25 Q. But wouldn't a reasonable reader infer from

1 this that there was not an earlier contact?

2 A. I don't know what someone would infer.

3 Q. Did you -- did it occur to you that, you
4 know, in all fairness, that that earlier intrusion
5 should be reported also?

6 A. At the time of this report being written,
7 my full focus was on this incident. And, again, this
8 was written in compilation with KSU IT.

9 Q. If you look at -- if you look at -- if you
10 go down to Kennesaw where it's bold, Kennesaw,
11 Georgia --

12 A. Uh-huh.

13 Q. -- March 31st. It says that no personal
14 information was compromised. Do you see that?

15 A. I do, sir.

16 Q. But isn't it true that Logan, Grayson and
17 Green all confirmed that millions of pieces of data,
18 including personal information was available, open on
19 the Internet?

20 A. I believe this document is written in
21 response to a KSU press release that was issued in
22 relation to this based upon investigation provided
23 back to them by the FBI.

24 Q. So it was -- okay.

25 So KSU released a statement that no

1 personal information was compromised and that's just
2 not correct, right?

3 A. I'm only speaking to what's before me in
4 the document.

5 Q. Okay. But you would not agree that no
6 personal information was compromised.

7 A. I do not know if personal information was
8 compromised or not.

9 Q. But you know that millions of pieces of
10 data about people, including personal information,
11 was available on the Internet to be compromised for
12 many months, right?

13 A. I know that the Center for Election System
14 placed an Express Poll data set on its web server for
15 access for counties. Who gained access other than
16 the counties, I am unaware.

17 Q. But -- but -- well, just cutting to the
18 chase, you know, Mr. Lamb could get in, Mr. Grayson
19 could get in, Mr. Green, who was a professor at
20 Kennesaw, confirmed that all of this information had
21 been compromised and was vulnerable. Correct?

22 A. Based upon the documentation, yes, sir.

23 Q. Okay.

24 Okay. Let me direct your attention to page
25 64. Can you describe for me the process and the

1 people involved in deciding to wipe the two servers?
2 What do you know about that?

3 A. I know that the servers were in the
4 possession of Steven Gay, who was the head of KSU IT
5 and KSU IT had taken possession of the servers and
6 were in control of the servers at that point.

7 Q. But you knew what they were doing with it,
8 right?

9 A. I knew they had possession of the servers.

10 Q. And you knew that they were going to wipe
11 the servers, right?

12 A. It's my understanding that they had
13 intention of trying to reuse the servers in some
14 other capacity within the University.

15 Q. And to do that they were going to wipe the
16 servers of the election information.

17 A. I did not know what they were going to do
18 with the servers. I knew that they had possession of
19 the servers and had intent to reuse them in some
20 capacity outside the Center for Election Systems.

21 Q. And you didn't tell them to wipe it or to
22 save it.

23 A. I did not. I entrusted the protection of
24 the devices, that hardware, in the hands of KSU IT
25 because I felt like that was the best course of

1 action.

2 Q. Let me direct your attention to page 65.
3 And this is still in Exhibit 21.

4 Mr. Gay writes: We need to develop a
5 comprehensive inventory of all assets on the CES
6 private network.

7 What is that?

8 A. That is what we referred to as our
9 air-gapped system where we kept our GEMS databases
10 during construction, the private terminals we spoke
11 of earlier today that ballot builders would do their
12 work, the hard-line network.

13 Q. The hard-line network between the
14 individual computers with the GEMS databases that
15 were used by the ballot builders --

16 A. Correct.

17 Q. -- that wired into the --

18 A. Ballot builder server.

19 Q. -- ballot builder server.

20 A. Yes, sir.

21 Q. Okay.

22 Let me go back to the discussion that we
23 had about the overall system and how the database
24 information migrated through it.

25 The -- in 2016, you had the ballot builder

1 server and you had the web server and you had the
2 Epic server, correct?

3 A. Correct.

4 Q. And tell me again what was on the Epic
5 server.

6 A. The Epic server contained voter information
7 extracted from the voter registration system as well
8 as election database files, so that those two things
9 could be brought together through a program called
10 Epic that would create the Express Poll data sets
11 that are used for election on the Express Poll ePoll
12 devices.

13 Q. And then how does that information make it
14 to the ePoll books computers that are in a polling
15 place?

16 A. Once the data file is compiled on the
17 Express Poll -- on the Epic server, it has to be
18 extracted from the Epic server. And it's done
19 through a formatted compact flash card that's
20 formatted before it's inserted into the Epic server.
21 And then the data is copied from the Epic server onto
22 the compact flash card, a single compact flash card.

23 The compact flash card is then placed into
24 an Express Poll unit device and the data file is
25 inspected to make sure that the data file is

1 operational. That it can be read by the Express
2 Poll, that it is responsive to commands, that the
3 display is showing information as it should be
4 displayed.

5 Once that information is checked and
6 verified, then that flash card is then removed from
7 the compact flash card. It is placed back into a
8 compact flash card reader to access the file
9 directory. And the transaction log that had been
10 created in that single insertion of the Express Poll
11 is then removed from that compact flash card so that
12 we remain with the base four data files that are --
13 make up the Express Poll data set.

14 That compact flash card is then taken to a
15 duplicating stack where that compact flash card is
16 inserted and then duplicate copies of that compact
17 flash card are created. The duplication process is a
18 full image of the compact flash card. The data files
19 and all empty spaces on the compact flash card is
20 duplicated onto other compact flash cards.

21 Those compact flash cards are then bundled
22 into secured bags for each individual county and then
23 those bags delivered to the county election offices.

24 Q. Okay. Now, the Epic computer, was it
25 replaced, has it been replaced since 2016?

1 A. It has been, yes, sir.

2 Q. And what's used now, same thing, just
3 different computer?

4 A. It's the same program sitting on a new
5 hardware.

6 Q. What type of hardware?

7 A. You would have to ask SOS IT that question.

8 Q. It's just a computer?

9 A. It's -- it's a server level computer. What
10 type, you would have to ask SOS IT.

11 Q. Okay. And then the other two servers that
12 were there, one was the ballot builder computer.

13 A. Uh-huh.

14 Q. And the web-facing -- the web server. Are
15 you with me?

16 A. Correct. Correct.

17 Q. The web server itself is no longer in use.

18 A. Where that physical box is and what
19 condition it is, I do not know.

20 Q. Okay. And that you have a computer now
21 though that is in function the ballot builder,
22 correct?

23 A. Correct.

24 Q. Okay. Is it the same hardware or different
25 hardware?

1 A. It's, again, a new hardware running the
2 same existing program.

3 Q. Okay. What's -- and then you have the
4 array of computers that the ballot builders work on.

5 A. Uh-huh.

6 Q. Those same type of computers now, right?

7 A. Those are all new hardware purchased by
8 Secretary of State's office, managed by the Secretary
9 of State's office.

10 Q. Okay. Now, the -- are you using GEMS
11 databases that were in use in 2016 when Logan Lamb
12 accessed the web server information?

13 A. We are using -- ask the question --

14 Q. Is the -- is the GEMS databases that were
15 in use in August of 2016, are you still using those
16 databases? Now I'm going to ask a couple more
17 follow-up questions.

18 A. Each -- each database is built specifically
19 for the election. Does it have long-term audit
20 history of preexisting that build?

21 Q. Right.

22 A. Yes, it would.

23 Q. And just sort of cut to the chase. If
24 malware were introduced into the system in 2016 or
25 before, has the -- either the computers or the

1 applications in your office been checked to see if
2 there's malware in it?

3 MR. TYSON: I'll object that it lacks
4 foundation on malware being introduced and calls
5 for speculation.

6 You can answer if you can.

7 A. The install of the GEMS executable program
8 on the hardware maintained by the Secretary of
9 State's office?

10 Q. (By Mr. Brown) Today, the one that's done
11 today.

12 A. Maintained today. When -- when it was
13 installed, that program, that GEMS executable
14 program, was compared, a hash signature was compared
15 of it with the GEMS executable that was brought
16 forward to the Secretary of State's office to the
17 State of Georgia in 2001 -- 2001, 2011 -- to validate
18 that it had the same hash signature as that that had
19 been built from a trusted built from a voting system
20 testing lab. I believe the lab at the time was
21 Cyber. And the hash compare came back clean.

22 Q. Which meant what to you?

23 A. Meant that the executable program of GEMS
24 did not contain any malware. It was exactly the same
25 program as it was once as installed in 2011.

1 Q. And that's with respect to the GEMS
2 database that was at the Secretary of State's office,
3 correct?

4 A. The GEMS executable program, yes.

5 Q. Okay. Thank you.

6 Now, counties have GEMS executable
7 programs, right?

8 A. They do.

9 Q. Was a similar sort of testing done with
10 respect to their programs?

11 A. The last state-wide examination of the GEMS
12 executable file state-wide was done in 2015. Since
13 that state-wide examination, we have visited numerous
14 counties through '16, '17, '18, and '19, and
15 continued to run this verification process every
16 time. And to this date, we have not found any
17 mismatches.

18 Q. What sort of verification process?

19 A. It's a hash signature compare.

20 Q. And how many different counties have you
21 done a hash signature compare operation to?

22 A. Every time anybody from my office goes to a
23 county, we run the hash signature compare. Again, as
24 previously stated, we did a state-wide inspection of
25 159 GEMS computers in 2015. Since then, we have been

1 continually visiting counties.

2 I don't know the number offhand how many we
3 tested in '16, how many was '17, how many was '18,
4 how many was '19, but we have continued to test
5 through those years and have still found no
6 mismatches.

7 Q. And you don't know if you have covered
8 every county or not sitting here.

9 A. Do I know if I have covered every county
10 since 215, 2015, I do not.

11 Q. Yes.

12 A. I do not.

13 Q. What is the utility that you use?

14 A. We call it GEMS Verify.

15 Q. And who makes it?

16 A. It was built by the Computer Science and
17 Information Security Division -- I believe that was
18 the name of the office -- at Kennesaw State
19 University. The professor was Dr. Mike Whitman.

20 Q. Has any kind of testing been done to the
21 memory cards that go from the county GEMS server to
22 the individual DREs?

23 A. What type of testing?

24 Q. Testing to see if there -- if there's
25 anything wrong with them, if there's any malware in

1 it or anything else.

2 A. The last time that all of the compact flash
3 cards were brought in from the -- not compact flash
4 cards, the memory cards --

5 Q. Memory cards.

6 A. -- for touch screens, the last time they
7 were all brought into the State and pristine, clean
8 images, reformatted images placed onto those devices,
9 I believe was in -- I'm guessing on the year, but I
10 believe it was done in -- it was either 2013 or 2015.

11 Q. Okay. And then the same question for the
12 internal memory of the DRE voting machines
13 themselves. Have those -- has that internal memory
14 for those machines been tested or checked in any way?

15 A. No, sir.

16 Q. Okay.

17 MR. BROWN: Twenty-seven.

18 THE REPORTER: Twenty-seven.

19 (Plaintiffs' Exhibit 27, Direct Record
20 Electronic Voting Machine Recap records, marked
21 for identification.)

22 Q. (By Mr. Brown) Let me hand you what has
23 been marked as Exhibit 27.

24 MR. BROWN: Here you go, Kaye. Wait. I
25 gave you too many.

1 Q (By Mr. Brown) Do you know what Exhibit 27
2 is, sir?

3 A. It appears to be a what I would call a DRE
4 voting recap machine from a polling location.

5 Q. And what is that used for?

6 A. This is used as work done at the polling
7 location by poll workers for reconciliation purposes
8 where they verify the equipment at open to
9 validate -- the first part of the form is filled out
10 at the conclusion of logic and accuracy testing to
11 indicate the devices that have been assigned to that
12 aforementioned voting location. And the seal number
13 that was placed on the device at the time the test
14 was concluded.

15 And then on election morning, the poll
16 workers begin filling out these numbers upon opening.
17 They validate that the seal number that was on the
18 device at the time of completion of testing is still
19 the seal attached to that unit. If that seal is
20 there, then they can break and remove the seal, turn
21 on the machine and validate the count that's on the
22 machine.

23 The machine should be at zero where it
24 starts off first thing in the morning and they
25 document that fact here in the record. And then at

1 the end of the polling day, they sort of go back --
2 they end the process in the election and then they
3 record the total number of votes, ballots collected
4 by each individual device. That's what's in the last
5 column under count number. And then the seal number
6 is what's placed on the device once the memory card
7 is removed and the unit closed.

8 Q. And then there's a, kind of a
9 reconciliation in the bottom half of the, of the
10 form; is that right?

11 A. Yes, sir. It takes information collected
12 from the Express Polls to document the total number
13 of voters that were issued voter access cards by
14 party association, if necessary. And then there's a
15 reconciliation done at the very bottom.

16 Q. Is there any sort of private or information
17 on here? Any security-related information that
18 you --

19 A. I mean, seal numbers prior to opening would
20 be something I would concern -- be concerned with.
21 But seal numbers placed on after closing, serial
22 numbers of devices, perhaps not.

23 Q. And why are -- why is that confidential,
24 the serial numbers prior to opening?

25 A. I said seal numbers.

1 Q. Seal numbers.

2 A. Seal numbers. Seal numbers.

3 Q. And that's -- you mean, the seal that --

4 A. The seal that's attached to the outside of
5 the device.

6 Q. Okay.

7 A. If you were attempting to penetrate a
8 system, if you knew what the seal number was, and
9 could replicate a seal, then you could potentially
10 remove a seal, do some action and then place a --
11 then place a duplicate seal in place and you would be
12 potentially avoiding detection.

13 Q. Okay. Let me hand you what has been marked
14 as Exhibit 28.

15 (Plaintiffs' Exhibit 28, Copy of
16 photograph, marked for identification.)

17 Q (By Mr. Brown) So that -- but before the
18 machines are installed, they are going to be sitting
19 out in the hallway with their seal number in plain
20 view though, right?

21 A. I don't know how each individual county
22 delivers their equipment to their polling location,
23 how they maintain it up until the time that it's
24 opened.

25 Q. Right. But they should keep them sort of

1 under wraps. Is that fair to say?

2 A. There are SEB rules in place that counties
3 are supposed to follow in relation to protecting
4 their voting equipment throughout the process.

5 Q. You are not sure exactly what they specify
6 with respect to the seal?

7 A. I know that there are rules in place that
8 counties have to follow to maintain their equipment.

9 Q. Do you see seal numbers on Exhibit -- on
10 the photo that's Exhibit 28?

11 A. I do see seals attached to units. I'm
12 assuming that the number below it is the number equal
13 to what's on the form. But these appear to be units
14 that are sealed, closed, and then also they have a
15 what's like a cable tie running through them and then
16 the cable tie padlocked.

17 Q. Is there a way of telling whether this is
18 before polls open or after polls close?

19 A. The normal procedure, if it's before polls
20 open, it would be a red seal on the unit. If it is
21 post-election, there would be a blue seal. That's
22 normal, standard procedure.

23 Q. So a color picture might disclose that on
24 this?

25 A. Perhaps.

1 Q. Okay. Now, the -- what assistance, if any,
2 does the Secretary of State give to municipalities in
3 connection with voting?

4 A. The Secretary of State's office does not
5 work directly with municipalities. The Secretary of
6 State's office, through statute, works directly with
7 county election officials in preparing election
8 databases, Express Poll data sets.

9 If the municipality is contracting with the
10 county, then we still, the Secretary of State's
11 office direct with the county, but then the county
12 may be then forwarding that work product to
13 municipality for use.

14 Q. Does -- if there is a municipal election
15 that is not a county election, how does the municipal
16 configure its GEMS database?

17 A. The municipality is not obligated to use a
18 GEMS. They are not required to use the DRE system.
19 A municipality can choose whatever form they wish to
20 use for election purpose.

21 Q. They could use hand-marked paper ballots if
22 they want.

23 A. If they so choose, yes.

24 Q. If they choose to use the DRE system, how
25 would they, how do they do that?

1 A. If they choose to use the DRE, they have to
2 be first contracting with the county and working with
3 the county to obtain the equipment. Or the
4 municipality has, has the legal where they can
5 contract with a vendor. If the vendor is certified
6 for use, if their equipment is certified for use
7 within the state, then the municipality can contract
8 with the vendor to prepare the necessary media,
9 potentially lease equipment from the vendor for use.

10 But any DRE equipment that might be used by
11 a municipality has to be tested by the State to
12 confirm that what it has matches the State-certified
13 use guidelines.

14 Q. You mean DRE, the hardware --

15 A. Correct. Correct. The hardware and the
16 ballot station software residing on the device has to
17 match what's certified for use within the State of
18 Georgia.

19 Q. Does the Secretary of State review the GEMS
20 database that a municipality that is not contracting
21 with the County builds for a municipal election?

22 A. What the -- what the vendor does, if the
23 vendor is contracted by the municipality, the vendor
24 would make that database available to the State for
25 the State to inspect, to validate that it is meeting

1 the guidelines under SEB rules for a DRE-developed
2 ballot.

3 Q. So before a municipality can use a ballot
4 that's configured through the GEMS database by a
5 third-party vendor, the vendor has to go to the
6 Secretary of State?

7 A. The vendor has to provide a copy of the
8 database for the Secretary of State's office to
9 review, to confirm that the ballot is meeting the
10 standards within the State Election Board rules for
11 ballot design.

12 Q. And who in your office is in charge of
13 reviewing those?

14 A. It would be -- it would be our office. If
15 the ballot builder is available, they review the
16 ballots. If I'm available, I may review the ballots.
17 It's whomever is available at the time that the
18 databases are delivered.

19 Q. Rough order of magnitude: How many
20 municipalities use the DRE for election in which they
21 are not contracting with the County to do the GEMS
22 database work for them?

23 A. That are just directly communicating with
24 the vendor for use? Again, this is an estimation.

25 Q. Sure.

1 A. The number in an off-year cycle for
2 November election in an odd-number year, probably
3 less than 20.

4 Q. Okay. What's the largest?

5 A. I think it is perhaps the City of Forest
6 Park. Could be the City of Stockbridge. City of
7 Peachtree Corners. Did I say City of College Park?
8 City of Fort Valley. Those are the ones that pop in
9 my head. City of Fort Oglethorpe.

10 Q. And do they all use the same vendor work?

11 A. Yes.

12 Q. And who is the vendor?

13 A. ES&S.

14 Q. ES&S is manufacturer of the DRE system.

15 A. They are the owners of the DRE system, yes.

16 Q. And does the Secretary of State have a
17 nondisclosure agreement with ES&S for this kind of
18 work?

19 A. I don't know if a nondisclosure agreement
20 is in effect, but being that ES&S is the state-wide
21 vendor for the State's voting system, it's just sort
22 of how to make sure the databases are accurate and
23 proper.

24 Q. And does the -- the State of Georgia has an
25 ongoing contract with ES&S.

1 A. Correct.

2 Q. And what -- is it a yearly contract?

3 A. Yes.

4 Q. Okay. For maintenance and --

5 A. Yes.

6 Q. And license too, right?

7 A. I -- you would have to ask the Secretary of
8 State's office what all is in the contract with ES&S.

9 Q. Who at the Secretary of State's office
10 would we ask?

11 A. General counsel.

12 Q. Okay. And connected with that there might
13 be nondisclosure or confidentiality agreements?

14 A. Potentially, yes.

15 Q. Is it under that umbrella that ES&S would
16 contract with municipalities?

17 A. ES&S, in the way the statute is written in
18 relation to municipal elections, municipals were in
19 control of their election and they can choose to run
20 the election how they wish. There's only one
21 certified vendor for DRE equipment currently within
22 the State of Georgia and that's ES&S.

23 Q. Do any municipalities use somebody other
24 than ES&S to do this work?

25 A. For what work?

1 Q. I'm sorry. To do GEMS database work.

2 A. Not to my knowledge.

3 Q. Does the Secretary of State directly
4 program any -- or configure any GEMS databases for
5 municipalities?

6 A. No, sir, we -- we only build databases for
7 counties. If the only thing in the county database
8 is a city election, that could be the content, but
9 the database is built for the county.

10 Q. And if the county gives it to, say,
11 Lawrenceville or Duluth that's up to them.

12 A. In that situation, the municipality does
13 not have a GEMS computer. The only GEMS computer is
14 within the county's election office. So there has to
15 be an arrangement between the county and the city in
16 relation to accessing the GEMS component if the
17 municipality needs direct access to the GEMS
18 database.

19 Q. So Forest Park and Peachtree Corners,
20 et cetera, they don't have a GEMS database.

21 A. That is -- that is correct.

22 Q. They simply -- they are leasing the voting
23 machines and what goes in the voting machines is
24 configured by somebody with a GEMS database.

25 A. The cities you mentioned, I don't know if

1 they lease the equipment or own the equipment. The
2 vendor, ES&S, once the database has been reviewed and
3 the database is also -- the reports, the proofs and
4 the filed proofs are provided to the jurisdictions
5 for review.

6 Once the jurisdiction signs off on the
7 database, then the vendor has the proper memory cards
8 for the devices, the optical scan units if they are
9 being used for mail-out absentee and provisional.
10 The DRE machines are then created onsite at the
11 Secretary of State's office.

12 Once those memory cards are created, then
13 the vendor delivers that material to the jurisdiction
14 from which they are contracted with.

15 Q. Well, let me change gears a little bit to
16 the lieutenant governor's race --

17 A. Okay.

18 Q. -- this last year.

19 You are familiar with allegations of
20 potential defects in the software that caused an
21 under-vote in the lieutenant governor's race; are you
22 not?

23 A. I understand there was a -- a high number
24 of under-votes in the lieutenant governor's race,
25 yes, sir.

1 Q. And could you describe for me the
2 investigation, if any, that the Secretary of State
3 has undertaken to determine if there was any
4 system-related defect that contributed to that
5 under-vote?

6 A. I know that Secretary of State's office did
7 visit a county, I believe it was Ben Hill County, in,
8 I don't remember the month, but it was after the LG's
9 race in 2018, to inspect and see if information
10 gathered from the archives of the DRE machines would
11 match the information that was produced from the DRE
12 machines on election night, and reviewed the ballot
13 image reports from GEMS against the totals calculated
14 by the touch screens. Did a hand count of the ballot
15 images from GEMS against the counts recovered from
16 archive on the DRE machines and found all the numbers
17 that were reported from the County on election night
18 were still the same numbers the machines were
19 producing post-election day.

20 Q. Did anyone review the configuration of the
21 ballots in the GEMS database to see if there was any
22 defect in that configuration?

23 A. The databases were looked at to confirm
24 that all of the races were present on all of the
25 ballot styles within -- given -- within all the

1 counties, like lieutenant governor's race was looked
2 at in all counties, and it was present in all ballot
3 styles, all counties, all locations.

4 Q. And are you referring back to before the
5 election, they wouldn't have gone out if the
6 lieutenant governor --

7 A. Yes, they would not have gone out if they
8 had not had the lieutenant governor's race on them.

9 Q. But did somebody check them after the race
10 to make sure they were on all those ballots?

11 A. I know that I have looked at many a
12 database post-election to confirm again that that
13 race was present on all. I can't say that I have
14 looked at 159 databases. But every database that I
15 have inspected, the lieutenant governor's race was
16 the second race on every ballot issued.

17 Q. Have you gone sort of one step beyond that
18 looking at the ballot to see if it was configured in
19 such a way that votes for the lieutenant governor
20 would, in fact, be recorded?

21 A. All testing done previous to the election
22 and tests done on Election Day in parallel monitoring
23 where we obtained, Secretary of State's office
24 obtained a copy of a database from a county GEMS
25 location, and programmed memory cards from four

1 randomly selected voting locations, randomly selected
2 precincts, and then voted a test pattern on those
3 ballots. Those ballots voted on Election Day during
4 the 12-hour election period all showed the lieutenant
5 governor's race and the votes calculated through that
6 parallel test matched the script that was placed into
7 it.

8 Q. Does the actual configuration in the
9 database for the lieutenant governor's race include
10 all voters in the state?

11 A. Say again.

12 Q. Does the actual configuration in the
13 database have all voters voting for the lieutenant
14 governor's race?

15 A. The build of the election's database, all,
16 all base precincts to which a voter would be assigned
17 to on Election Day, that base precinct has a ballot
18 style and that base precinct is assigned to the
19 county-wide district. That's the same district to
20 which the lieutenant governor's race is also assigned
21 to.

22 There is one base precinct within each
23 county that would not have had the lieutenant
24 governor's race. In fact, it would not have had the
25 governor's race on it. It would only have had a

1 federal race on it. And that race is for federal --
2 it's called a federal ballot. It's for federal
3 purposes. It's for those citizens, United States
4 citizens that live abroad. They are United States
5 citizens and they are eligible to vote in the federal
6 election, but they are not a resident within the
7 State of Georgia.

8 Q. There are affidavits from people who say
9 that the lieutenant governor's race was not on their
10 DRE ballot when it was initially displayed and was
11 not displayed until they reached the summary page.
12 And there is more than one of those. Have you
13 researched that phenomenon?

14 A. All I can speak to is every database that I
15 have looked at, every database report that I have
16 looked at in connection with preparing for the LG
17 case that was heard earlier this year, in every
18 instance, the LG's race was present within the
19 database, it was present within every ballot style,
20 it was present in the DRE machines as the second race
21 listed to the right of the governor's race on the
22 first page of the ballot.

23 Q. Are you aware of a faulty configuration
24 that could cause a race to not appear on the ballot
25 screen first, but appear on the summary screen?

1 A. I have never seen that.

2 Q. And you are not aware of a configuration
3 that would cause that?

4 A. I am not aware of such a configuration.

5 Q. Does the same configuration drive both
6 pieces of the ballot, the visual ballot on a
7 electronic screen?

8 A. Meaning what you see in the printed ballot
9 versus what you see on the DRE?

10 Q. No. Is it -- say you have five races and
11 the ballot builder codes it so you have five races.
12 One national, two state-wide, dog catcher, attorney
13 general, okay, all those five. Having described
14 those races, does the DRE system then automatically
15 populate the summary screen?

16 A. The summary screen is populated by the race
17 header for each individual race with -- contained
18 within the ballot. So whatever you see on the
19 ballot, where it says: For governor, vote for one,
20 that same header is what you see on the summary
21 screen for each individual race.

22 So if the race appeared on the ballot on
23 the DRE, that same text appears on the summary
24 screen. It's the exact same information.

25 Q. If -- if you were told that you couldn't

1 use the DRE machines anymore, the voting machines,
2 but let's say you could, for the time being at least,
3 use the GEMS system to build ballots -- are you with
4 me?

5 A. Yes.

6 Q. The work that you would do to design
7 ballots, paper ballots would be the same, correct?

8 A. Correct.

9 Q. You just wouldn't get to do the work
10 associated with designing the ballot for the
11 electronic screen; fair enough?

12 A. The database, we would not have to do
13 anything extra in the design of the ballots. If we
14 did not -- were not allowed to use the DREs, we would
15 just tell the polling location in its database setup
16 that when you create a memory card, you would be
17 creating an optical scan memory card, not a -- not a
18 touch screen memory card.

19 Q. And the ePoll mechanism for checking on
20 votes could be used pretty much the same way,
21 couldn't it?

22 A. The Express Poll, the resource file --

23 Q. Right.

24 A. -- would have to be adjusted so that the
25 Express Poll would give the operational use to the

1 poll worker that the -- what -- what currently
2 creates the voter as being marked on the Express Poll
3 is the creation of the voter access card that's used
4 by the DRE. The resource file would have to be
5 reconfigured so that a button would be appearing to
6 move the voter from not voted to voted.

7 Q. But that's feasible.

8 A. That would be a redo of the resource file.
9 How -- how much work would have to be done on the
10 resource file, I do not know.

11 Q. Okay. And then the actual printing of
12 ballots is something that you take instruction from
13 the counties as to who they want to print their
14 ballots, right?

15 A. Right. Right. The counties provide -- a
16 sign-off sheet is a line that says our printer is X.

17 Q. And there's a handful of printers --

18 A. Yes.

19 Q. -- or dozens?

20 A. There's -- in the State of Georgia, the
21 printers that are used are ES&S, Printelect, which is
22 based in North Carolina. There's a printer in
23 southeast Georgia, Tattnell Printing, and I think
24 there are a couple other printers that do ballot
25 printing.

1 MR. BROWN: I'm going to take a break to
2 make sure that my piece is done, got a couple
3 more minutes max, okay. But just a real short
4 break.

5 THE VIDEOGRAPHER: The time is 2:44 p.m.
6 We are now off the record.

7 (WHEREUPON, a recess was taken.)

8 THE VIDEOGRAPHER: The time is 2:49 p.m.
9 We are back on the record.

10 Q. (By Mr. Brown) Okay. Mr. Barnes, let me
11 hand you again what has been marked as Exhibit 26.
12 If I -- if I told you, okay, that these two
13 individuals lived under the same roof, and therefore
14 it probably isn't a ballot style, if it weren't that,
15 what would that be?

16 MR. TYSON: Object that it calls for
17 speculation.

18 But you can answer if you can.

19 A. Again, not knowing the configuration of the
20 voting location, a polling location can have multiple
21 precincts assigned to it that have the same combo
22 value. And in this relationship, again, I will stick
23 with my answer saying it's 848 is the combo, 07H is
24 the reporting precincts and 68 is the -- and 64 is
25 the ballot style.

1 Q. 66 and 74 is the ballot style?

2 A. Is the ballot style.

3 Q. Even though those people might be husband
4 and wife, whatever.

5 A. Yes, that's -- that's the way that I
6 interpret that, that reading right there.

7 Q. Fair enough.

8 A. The Democratic ballot, the combo associated
9 to the voter, the precinct associated with the voter
10 and the physical ballot style.

11 Q. Okay. You -- you mentioned in connection
12 with the ePoll books and the way that that
13 information was transmitted to the counties. I
14 believe you said it was bundled up and secure with
15 compact flash cards, correct?

16 A. Uh-huh, correct.

17 Q. Are you -- do those ever get updated in
18 between --

19 A. After every, after every election the
20 compact flash cards are used in, those compact flash
21 cards are all delivered back to the Secretary of
22 State's office where the transaction record is
23 removed so that we can create the numbered list of
24 voters post-election and also create a file, a text
25 file given to the State that outlines every voter

1 that participated in the election.

2 Those compact flash cards are maintained by
3 the Secretary of State's office and then they are the
4 same cards we will use again for the next election.
5 And, again, we will go through that formatting
6 process which is a duplication process.

7 Q. But the information, if it needs to be
8 updated, do you recall Secretary of State's office
9 tweeting out, counties, you need to get your updated
10 ePoll books information or something to that effect?

11 A. Are you meaning like updating the
12 information prior to Election Day?

13 Q. Sure.

14 A. There is a process, once the county has
15 received their compact flash cards that contain the
16 elector's list and everybody that has voted absentee
17 up until the time that data set was created is sent
18 out to the county via the compact flash card. At the
19 end of advanced voting, we have to update or the
20 counties have to update their Express Polls to
21 indicate everybody that has been voted absentee or
22 been issued an absentee ballot through the advanced
23 voting process.

24 It's so that when they come in on Election
25 Day, the poll shows that they have already been

1 issued an absentee ballot. This is called a "bulk
2 update file." And that update file is a list of
3 registration numbers that is placed, that is
4 generated through Epic at the close of the advanced
5 voting period leading up to an election, and then a
6 single update file is generated for each individual
7 county. That update file is placed on the SOS FTP
8 within each individual county folder and then the
9 county pulls that file down directly and updates
10 their Express Polls.

11 Q. And before the FTP communications process
12 was used, how was that done?

13 A. Before the SOS process?

14 Q. Right.

15 A. That was done through the
16 elections.Kennesaw.edu web server.

17 Q. Okay. And do you use your personal e-mail
18 or phone for CES business?

19 A. No, sir, I do not. I have a state phone
20 and I have a personal phone.

21 Q. Okay. And what is your state phone number?

22 A. 678-594 -- or no, excuse me. Excuse me.
23 (470) 594-0072, I believe.

24 MR. BROWN: Okay. That's all I have for
25 now. I'm going to switch. We are switching

1 lawyers at this point.

2 Thank you, Mr. Barnes.

3 THE WITNESS: Uh-huh.

4 THE VIDEOGRAPHER: The time is 2:53 p.m.

5 We are now off the record.

6 (WHEREUPON, a recess was taken.)

7 THE VIDEOGRAPHER: The time is 3:02 p.m.,

8 and we are back on the record.

9 EXAMINATION

10 BY MS. BENTROTT:

11 Q. Hi, Mr. Barnes. We met off the record. My
12 name is Jane Bentrott. I represent the Curling
13 plaintiffs.

14 A. Yes, ma'am.

15 Q. I've got some more questions for you.

16 A. Okay.

17 Q. If you don't mind, I just want to go back
18 to some of the things you discussed with my colleague
19 this morning just to make sure I understand some
20 things that I might have missed. I'm going to try to
21 do my best estimation of repeating back to you things
22 you said today. Please correct me if I get any of it
23 wrong.

24 A. Okay.

25 Q. You were speaking about the process of

1 building the ballots and how the ballot builders that
2 build on their own ballot building computer and then
3 there's the ballot building server, correct?

4 A. Correct.

5 Q. How does the information get from the
6 ballot building computers that the ballot builders
7 use at their desk to the ballot building server?

8 A. Those computers are directly connected
9 through a network line, a network connection. And
10 best way of example is that when they have a product
11 ready to save to the server, they are saving that
12 document to a folder that's residing on the server.

13 Q. Okay. So they are networked to each other.

14 A. Correct.

15 Q. Okay. And then when the ballots are ready
16 to then be -- the proofs to be generated and sent to
17 the counties for review --

18 A. Uh-huh.

19 Q. -- how are those files, how is that
20 information transmitted to the counties?

21 A. Right.

22 Q. What's that process?

23 A. Right. The -- I'll say terminal, the CPU
24 that's connected through the network to the ballot
25 building server, it -- the data file that's on the

1 server is loaded to the terminal unit. The CPU. So
2 you have to load the data, get back into the server.
3 Not the server. Into the personal computer, the CPU.

4 Then the pdfs are generated. The pdfs are
5 then saved to a folder on the server. Then we have
6 one USB drive that I hold onto that. And it's
7 reformatted every time that we use it. The pdfs are
8 copied from the folder on the server and saved to the
9 USB drive that is plugged into the CPU unit.

10 And then the jump drive is removed. It's
11 locked. It's actually got a locking mechanism on it.
12 And it's taken to a separate computer, a -- our SOS
13 public computer. Where I then access the SOS FTP
14 folder locations for the counties and then I cut the
15 file from the USB drive and post it to the SOS FTP
16 location.

17 Q. Okay. So the CPU that you are referring
18 to, that's the ballot building server?

19 A. No.

20 Q. That's the personal computer?

21 A. That's the personal computer.

22 Q. Okay. And then same question with respect
23 to how the CD gets generated.

24 A. Uh-huh.

25 Q. What's the process for that? How, how does

1 the information get loaded onto the CD?

2 A. Same thing is that the file is copied from
3 the server, and then it is placed onto a CD through a
4 CD burning program that's housed on the individual
5 CPU.

6 Q. Okay.

7 A. We don't have -- we don't have an ability
8 to actually plug directly into ballot builder. It's
9 in a locked cage, we can't get to it.

10 Q. Okay. So when the data is loaded from the
11 CPU to the server, that's all done through the
12 network connection between them?

13 A. Uh-huh.

14 Q. Okay. Got it. Thank you.

15 Okay. You talked about the returns being
16 certified and the county bringing their physical
17 returns back to the Secretary of State's office. And
18 then the State will certify those returns if it's a
19 state-wide election.

20 A. Uh-huh.

21 Q. And then a physical record is placed in a
22 sealed envelope and handed to the -- hand-delivered
23 to the Secretary of State's office?

24 A. Uh-huh, uh-huh.

25 Q. What is the physical record that you are

1 talking about?

2 A. The physical record that the counties -- I
3 will answer this to the best of my knowledge, because
4 it's the counties that are executing this task. I
5 just have knowledge of what they are doing.

6 But the county election officials will
7 gather the materials that they are required to gather
8 under statute, which are the certification form.
9 There's a form that the county fills out and says,
10 These are the returns for our election. And here's
11 the races and here are the vote totals and then it's
12 signed off by the election superintendent. If it's a
13 board, it's the board itself. If it is the probate
14 judge, it's the probate judge in that locale.

15 So it's those -- it's that paperwork.
16 There are specific reports that are generated from
17 the GEMS server, the statement of votes cast report,
18 which is a precinct-by-precinct breakdown of all
19 races contained within the reelection. There is also
20 an election summary report which is the grand total
21 of votes for each individual race contested within
22 that election.

23 I believe they also send back copies of the
24 precinct recap sheets. Those are forms in
25 triplicate. So one of those triplicate forms is

1 included with the official hard copy returns. And
2 then a copy of the GEMS database is burned to CD and
3 also forwarded back to the Secretary of State's
4 office.

5 Q. Okay. And do you have an understanding of
6 the process by which the copy of the GEMS database is
7 burned to the CD?

8 A. It's the same process. There is a -- a CD
9 burning program on, on the GEMS computer at the
10 county level. They put a blank CD into that device.
11 They open up that program and then they copy the
12 database from their -- from their backup location on
13 the server, place that copy there in the burn file
14 and then create, burn the CD.

15 Q. Is there any kind of special CD that's used
16 or any -- you know, is everyone free to choose
17 whatever CDs they have available for this process?

18 A. Yes, the county can, the county can use
19 whatever reads -- you know, writable CD they have.

20 Q. You mentioned earlier that the ballot
21 builder server, the ballot builder computer, that
22 there was a backup of it. Do you recall that?

23 A. I do recall that. Where we would
24 periodically make backups of our servers so that we
25 would not lose data. If lightning struck and hit the

1 operational server, we would have a backup. And our
2 IT group did that backup. How they made that backup
3 and what way they kept that backup, where they kept
4 that backup, I don't recall.

5 Q. And is this a process that's still done
6 today?

7 A. The SOS protocols are continually backing
8 up the devices they manage. Again, how SOS manages
9 that backup, you would have to ask their IT
10 department.

11 Q. So you don't know if it's done by inserting
12 a memory card or loading it onto a CD or transmitting
13 it through the --

14 A. I do not know how they do their -- their
15 redundant backup process.

16 Q. And you mentioned earlier -- and this was
17 back in the 2016 time frame -- the access to the room
18 where the ballot building computer was. And I
19 believe you mentioned four people had access.
20 Yourself, Stacy Jackson, Merrill King and Steven
21 Dean. Is that correct?

22 A. Uh-huh, uh-huh.

23 Q. No one else had access to that room?

24 A. I believe that those were the only four
25 people that had card -- it was all card key-accessed.

1 So in order to get into that room, in order to get to
2 that room you first had to have card key access into
3 the Center itself. And then everybody that had card
4 key access to the Center itself didn't have card key
5 access to the server room.

6 So there was another magnetic card swipe to
7 get into the server room. In my recollection, it was
8 just myself, Mr. King, Mr. Dean and Miss Jackson.
9 That's my recollection.

10 Q. So when the ballot builders would need to
11 key in information to the computer, they did that on
12 their own stations?

13 A. Yes.

14 Q. And not to the ballot building server?

15 A. That's correct.

16 Q. The way it got to the ballot building
17 server was just through the network?

18 A. Uh-huh.

19 Q. And did any janitorial staff have a key
20 card to that room?

21 A. Not to that server room, no.

22 Q. So was it really dirty?

23 A. It was not a very big room, so it was -- it
24 wasn't the cleanest room in the office. But it was
25 well-kept.

1 Q. Did that fall to you?

2 A. I -- I tried to make sure that the IT staff
3 were making sure that their work areas were
4 well-kept.

5 Q. So were there -- besides the four people we
6 have discussed, did additional IT staff have access
7 to that room?

8 A. My recollection is that it was myself,
9 Mr. Dean, Mr. King and Miss Jackson.

10 Q. Okay. And then you said that for that
11 computer, everything was user name and
12 password-protected, correct?

13 A. Correct.

14 Q. Do you know how the passwords were
15 generated?

16 A. I do not recall.

17 Q. Do you recall how often they were required
18 to be changed?

19 A. I do not.

20 Q. The CDs that were sent to the counties --

21 A. Uh-huh.

22 Q. -- they were encrypted as well?

23 A. Yes.

24 Q. Do you recall the process by which that was
25 encrypted?

1 A. It was a password-protected zip folder.

2 Q. Do you know what method of encryption was
3 used?

4 A. I do not.

5 Q. Do you know how the passwords were
6 generated?

7 A. Randomly. We, we actually set up a
8 spreadsheet at the time that would randomly generate
9 the passwords that would be assigned to the CDs.

10 Q. And so did that spreadsheet store the
11 passwords?

12 A. My recollection at the time is that it
13 would produce -- we would print it out, we would have
14 it available to us so that when we were burning the
15 CDs, we knew what the password was that would go to
16 that CD.

17 Q. And who would have access to that
18 printed-out spreadsheet?

19 A. And here's where I may be getting confused
20 in my own memory of KSU and SOS.

21 Q. Sure.

22 A. The passwords that we placed within the CD,
23 the SOS-generated passwords, are on the folders
24 themselves that we would, that we generate to track
25 the work that we have done for that operation. So my

1 recollection is that's where the password was. We
2 had a database tracking system that we were saying,
3 Okay, we are creating this record for this county,
4 for this election and it would generate a label.

5 At the time that label was generated, it
6 would generate a random number in places, this would
7 be the password associated to the zip file.

8 Q. And so that generation process, that was a
9 software that was on the computer that you used that
10 would randomly generate this?

11 A. That was on another device -- on another
12 device, not on the ballot building device. It was on
13 different device.

14 Q. Which device was that on?

15 A. The, the election tracking process is -- is
16 maintained -- the -- that election -- it was -- it
17 would be maintained on ballot builder.

18 Q. The ballot builder PCs that the ballot
19 builders would use.

20 A. The access to the -- like, again, the file
21 is stored -- the file is saved to that server, but
22 the program to access the file is on the CPU.

23 Q. Okay. And the name of the program? If you
24 recall?

25 A. I think it's just CES database tracker.

1 Q. And is this process currently used at the
2 SOS's office?

3 A. Yes, yes.

4 Q. And so I know you said that you would print
5 out the spreadsheet with the passwords. Do you have
6 any recollection of then deleting the file that had
7 the passwords or somehow disposing of that on
8 computer?

9 A. I do not recall.

10 Q. So it's possible that it's saved.

11 A. Yes, yes.

12 Q. But you don't know one way or the another.

13 A. I just do not know.

14 Q. Understood. Okay.

15 When we were talking about the files that
16 Logan Lamb was able to access, and you mentioned that
17 you were surprised that certain PII was available to
18 him because it wasn't within 10 days of an election;
19 do you recall that discussion?

20 A. Uh-huh.

21 Q. What happens to files containing PII from
22 prior election?

23 A. The protocol that was in place and should
24 have been followed was that once a data file was
25 posted at the conclusion of that election, that all

1 those folders would have then been emptied where the
2 folder resides. The data file would be retained.
3 The data file is on the Epic server. It's on other
4 components. But the web server would be cleared of
5 information within those county folders.

6 That is the protocol that should have been
7 followed.

8 Q. So it's your assumption that that protocol
9 wasn't followed and that's how Mr. Lamb was able to
10 access that information?

11 A. What the protocol was is the data was
12 supposed to be removed once the election concluded,
13 once there wasn't any need for the county to have
14 access to that data set. And if the data is there,
15 that means that there was a failure in doing the job.

16 Q. What -- what is all of the information --
17 and we have touched on some of it -- what is the
18 universe of information that is intended to be, or at
19 least back in the 2016 time frame, was intended to be
20 available on the web server?

21 A. The web server without county privileges,
22 user name, password was very limited in scope. It
23 basically gave information about where the Center
24 was, who we were, what our mission statement was. It
25 was a tool to communicate information to

1 individual -- to counties. So information on
2 training. We had presentations, PowerPoint
3 presentations that were there that counties might use
4 to educate their board members on how elections are
5 operated within the State of Georgia. Things that
6 were sent for training purposes is what was available
7 to the counties.

8 And as we would get closer to an election,
9 then we would start posting ballot proofs, reports,
10 ballot database reports for counties to easily pull
11 down access, review sign-off sheet. They would pull
12 down, print out locally and then fax back to the
13 Center to validate that they had reviewed their
14 ballot packet and that it was found correct. Or if
15 there was mistakes, to notify us of mistakes.

16 There was a reporting, a way for counties
17 to communicate back to CES about any issues that may
18 have -- they may have encountered. Touch screen not
19 turning on or something of that nature during
20 election use. So that information was like a report.
21 Like, you know, this, this polling location had this
22 issue. So that was the way we would gather
23 information from the counties on election, at
24 election time.

25 And that was the use of the website. It

1 was a distribution point of getting data to counties
2 to help them execute their election.

3 Q. And the counties all had user names and
4 passwords by which they would access their
5 county-specific information.

6 A. Yes. Yes. Yes.

7 Q. Do you know how those user names and
8 passwords were generated?

9 A. I do not recall how they were generated.

10 Q. Do you recall how often they were required
11 to be changed?

12 A. I do not.

13 Q. Do you recall the process by which a new
14 user name and/or password might be generated in the
15 instance, for example, that a county employee retired
16 and a new county employee filled that roll?

17 A. I do not recall.

18 Q. You were talking about the secure FTP
19 process that's used now at the Secretary of State's
20 office. Do you recall that discussion?

21 A. Uh-huh.

22 Q. And you said there's an extent to which you
23 rely on the Secretary of State IT department for your
24 assurances that it's secure.

25 A. Uh-huh.

1 Q. Who are the people on whom you rely for
2 those assurances related to the security of the
3 system?

4 A. The CIO for the Secretary of State's office
5 is Merritt Beaver. So he is -- he's stop number one
6 with any IT concerns that anybody in the Secretary of
7 State's office has. Because we are not the only
8 users of that particular use. The elections division
9 in whole uses that tool to communicate back and forth
10 with counties in relation to elections operations.
11 But he would be my first, my first point of contact
12 within the IT operation.

13 Q. Is there anyone else who you rely on for
14 those types of opinions?

15 A. I always work through Merritt, so I have
16 tried to always work through the CIO so he is aware
17 with any concerns that my group may have.

18 Q. What concerns does your group have at the
19 moment?

20 A. We do not have any concerns currently.

21 Q. What concerns have you expressed to
22 Mr. Beaver in the past?

23 A. Just accessibility. They are constantly
24 working to make sure that their systems are secure.
25 And sometimes they will introduce some new

1 components.

2 One example was with the FTP site just
3 recently, they did a security upgrade to the site.
4 And that security upgrade actually reset all the user
5 names and passwords unbeknownst to my department. So
6 we actually had put files out for counties to access
7 on the FTP and leading up to this most recent
8 election in June and they could not access the files.
9 They cannot sign in. They couldn't log into it.

10 So immediately we were like, why, why
11 can't, why is this denying them access in? And we
12 could not resolve the problem because we don't have
13 direct connection to the FTP configuration so that
14 had to be taken to Merritt to say, Hey, what
15 happened? Can you get these counties back in
16 connection with this device so that they can get the
17 data they need from us?

18 Q. Do you recall how he responded to your
19 inquiries?

20 A. They immediately began working to resolve
21 the situation. And within a couple of hours of us
22 notifying them, they had resolved what the issue was
23 and had gotten direct contact with the counties to
24 get them reconnected.

25 Q. Do you recall if the counties were given

1 new passwords or if their existing passwords were
2 resolved?

3 A. I believe they had to completely rebuild
4 the FTP connection, so it would be a new connection
5 into the FTP, meaning new user name or new password.

6 Q. Do you recall any details of what that
7 entailed?

8 A. That, I do not. That's a question for SOS
9 IT.

10 Q. If you know, what was the security update
11 that was installed?

12 A. That's -- that's a question that you would
13 have to ask SOS IT.

14 Q. So you don't know?

15 A. They manage all of that stuff. I let them
16 do their job.

17 Q. Do you know anything about why a security
18 update was initiated?

19 A. You would have to ask SOS IT that.

20 Q. So that's not information that you have.

21 A. It's not information that I have.

22 Q. You talked about, in the March 2017 time
23 frame, your immediate concern being just resolving
24 the vulnerabilities that were detected. Do you
25 recall that?

1 A. In the March '17, is that when that
2 escalated was immediately -- you know what, we have a
3 problem that must be resolved?

4 Q. Once the problem was resolved, do you
5 recall participating in any conversations where there
6 was a discussion about investigating the cause of
7 those vulnerabilities?

8 A. No.

9 Q. Do you recall participating in any
10 discussions regarding any potential effort to
11 determine the extent of those vulnerabilities?

12 A. I do not.

13 Q. Do you recall participating in any
14 discussions to determine whether there was any
15 additional unauthorized access to the system?

16 A. I do not.

17 Q. Okay. So you talked about the Epic server
18 and how there was an Epic server back at KSU and
19 there's a new Epic server at the Secretary of State's
20 office now.

21 A. Yes, yes.

22 Q. And the hardware is different, correct?

23 A. Correct.

24 Q. And you said the new Epic server is using
25 the same program that the KSU server was using.

1 A. The same version of Epic, yes.

2 Q. Do you recall how the program -- well,
3 stepping back, what is that program?

4 A. It's -- it's literally called Epic. That's
5 the name of the program. That stands for Express
6 Poll Integrated Central Server. Long name for --

7 Q. That's why we shorten it to Epic?

8 A. Exactly.

9 Q. Was it a brand-new installation of software
10 that was installed on the SOS server or was it
11 migrated somehow or do you not know?

12 A. I do not know.

13 Q. And same question with respect to the
14 ballot building server.

15 A. Uh-huh.

16 Q. Because it's running the same program as it
17 was at KSU, correct?

18 A. Right. Again, I don't know what steps SOS
19 IT took to get all of that stuff operational.

20 Q. Understood.

21 In your discussion of detecting malware,
22 you talked about a process for looking for the same
23 hash signature. Do you recall that discussion?

24 A. Uh-huh, I do. I do.

25 Q. That process validating the hash signature,

1 is that the entire scope of the process that the
2 Secretary of State's office engages in to confirm
3 that no malware was installed on the GEMS executable
4 in the system?

5 A. The inspections that are done on a GEMS
6 computer locally whenever, whenever we do what we
7 classify as an acceptance test on a GEMS server first
8 off starts with the GEMS-verified process. To first
9 run the hash compare on, on the local computer at the
10 county level to first validate that what's been --
11 what's installed from an executable standpoint is
12 equal to what should be there.

13 Once that process is performed, we then
14 load an election database that we bring with us to
15 the system and produce memory cards for DREs, memory
16 cards for optical scan and we perform basically a
17 small little election. Where we create, we have a
18 test stack of ballots that we put through a scanner
19 to validate that the GEMS computer will create
20 information to a memory card, optical scan memory
21 card, that will recognize our test deck and that the
22 scanner will interpret our test deck properly and
23 then report that information back to the server
24 properly.

25 We also create touch screen memory cards

1 with a specific ballot on there, place them into DREs
2 locally at the county and go through a test to
3 validate that they are showing the information as
4 they should. That they are calculating votes placed
5 into them as they should and reporting that
6 information back to the server itself. And then we
7 have the server tabulate all that information to
8 confirm that it is calculating all the input that is
9 being placed into it.

10 Once that process is completed, the last
11 thing we do is run GEMS verify again to validate
12 again that the operations we did, did not alter the
13 executable in any way, shape or form to validate
14 again that the system is showing zero mismatches at
15 the time that we leave.

16 Q. Are there any other components to this
17 process or any other processes that the Secretary of
18 State's office engages in to confirm that no malware
19 is installed?

20 A. That is what we do.

21 Q. Is it your understanding that the hash
22 signature compare process is sufficient to confirm
23 that malware isn't installed?

24 A. My understanding of a hash process is that
25 it takes a file and it creates a numerical value

1 based upon all of the zeros and ones, all of the bits
2 within the program. And that if there's any
3 alteration into the program and how it operates, it
4 would alter the zeros and ones within the program and
5 thus create a different hash value when calculated.

6 Q. So does that mean yes?

7 A. The hash process would show that there's a
8 difference between the baseline standard, what it
9 should be, and if it calculates a different value,
10 then that's saying it's not equal to what it should
11 be.

12 Q. So if there's any malware installed, then
13 the hash process will reveal that the executable is
14 not what it should be?

15 A. If -- my understanding being if the malware
16 has attacked, has attacked the executable to make it
17 do something other than what it was originally
18 written and compiled to do, then, yes, that would
19 come back with a mismatch signature.

20 Q. Okay. We are going to shift gears a little
21 bit.

22 So I understand that your main role isn't
23 IT. You are not the IT guy.

24 A. Uh-huh.

25 Q. Merritt Beaver is the CIO, correct?

1 A. Correct.

2 Q. But I would like to understand the scope of
3 your responsibility related to safeguarding the
4 election, the election system.

5 A. Uh-huh.

6 Q. And what decisions you make that affect
7 cybersecurity.

8 A. Uh-huh.

9 Q. So, for example, what is your role in
10 choosing any software used in the SOS office?

11 A. I do not have a role in selecting software
12 used within the SOS office. The SOS IT operation
13 controls the software that is available to us as
14 employees at the Secretary of State's office.

15 So if I have a specific need, then I don't
16 even give them suggestions on software. I say, I
17 need something that can do this. Can you provide me
18 some sort of resource? And then it is -- we actually
19 put it into a ticketing system, a request to SOS IT
20 for, you know, some need.

21 Q. What types of -- what needs have you
22 expressed in the past if you can recall?

23 A. The most recent need or want that I
24 expressed to SOS IT was a way to graphically update
25 people within the Secretary of State's office on our

1 ballot building process. That they can see what
2 counties are in the build queue, what counties have
3 already been built and they are awaiting sign-off.
4 So something much that nature that could be used to
5 give a graphical, basically, a picture of Georgia and
6 see here are all the counties that are engaged in
7 this election and here's where they stand.

8 Q. Was that intended to be used just
9 internally in the SOS office --

10 A. Yes.

11 Q. -- or communicated to the counties as well?

12 A. That would be used as an internal
13 notification within the office.

14 Q. And do you have this functionality now?

15 A. We actually, working with IT, we determined
16 that actually it's a process that you can use Excel
17 for. And Excel actually has a mapping feature in it
18 where you can take information in Excel spreadsheet
19 and actually turn it into a visual.

20 Q. Excel does so many things.

21 So do you know what steps are taken, if
22 any, to determine that software is secure before it
23 is installed?

24 A. That is a question to ask SOS IT.

25 Q. Same question with respect to installing

1 software updates.

2 A. Again, that's a question to ask SOS IT.

3 Q. Same question with respect to security
4 patches.

5 A. That's again SOS IT.

6 Q. Do you have any role in designing security
7 protocols or procedures?

8 A. For what?

9 Q. Anything.

10 A. The only role I have is working with the
11 elections division and reviewing the directions that
12 the election division may put together in response to
13 SEB, SEB rules for tasks that counties are required
14 to perform.

15 So, you know, whatever the SEB has
16 delineated as this is a requirement of the county,
17 then based upon, you know, how the equipment may
18 operate within the elections environment, we, you
19 know, outline or help the election division figure
20 out, you know, what's -- how do we phrase this on the
21 paperwork so that the poll worker or the election
22 official knows what to get from the GEMS system or
23 from a DRE.

24 Q. Can you give me an example?

25 A. Example would be precinct recap sheet that

1 you see. Is public count, where is that, that's
2 public count is the counter that's going from zero to
3 whatever the end point is for that given election.
4 You know, the -- what should be placed on the touch
5 screens, a seal -- you know, a seal that designates
6 that it was sealed prior to the beginning of the
7 election or sealed post-election.

8 Situations like that. Helping develop the
9 paperwork that the poll workers may be using on
10 election day or election night or during advanced
11 voting.

12 Q. You described a process earlier about
13 testing, like the logic and accuracy testing.

14 A. Uh-huh, uh-huh.

15 Q. What is your role in overseeing that
16 testing or being -- what is your role in that testing
17 at all?

18 A. Our group helped develop the logic and
19 accuracy procedures that counties use. The steps
20 that they follow in getting equipment prepared.
21 Basically how to create the memory cards, how to do
22 your diagnostic tests on the DREs, how do you make
23 sure the clock is set properly. How do you make sure
24 the paper is fed into the roll properly. How do you
25 transition from pre-election to election mode, from

1 election mode to post-election mode, things of that
2 nature.

3 Q. Are you aware of any current threats to the
4 Georgia election system that need to be protected
5 against?

6 A. I think we constantly work to protect the
7 Georgia election system from any and all threats. Is
8 that every election is an exercise. And that we
9 follow the rules as outlined by the Secretary of
10 State, as by the State Election Board, and through
11 the code to make sure that the equipment is ready for
12 election use, that it's used properly by voters, by
13 the poll workers and that everything is accounted for
14 at the end of the day.

15 So we are constantly working to make sure
16 that we have as tight a ship operationally as we can.

17 Q. Are there any specific threats of which you
18 are currently aware?

19 A. Any specific threats made to the Secretary
20 of State or to --

21 Q. Throughout -- to the -- to the Georgia
22 voting system generally, to the safety and security
23 of --

24 A. I can't speak to any direct threat that I
25 have been made aware of that changes how we make sure

1 the system is functioning as it should.

2 Q. Are you aware of any threats that have not
3 changed the way you are working to make sure the
4 system is functioning?

5 A. I am not.

6 Q. Have you read the Mueller report?

7 A. I have not read the Mueller report.

8 Q. Why not?

9 A. I have just chosen not to read the Mueller
10 report. I just am not really following all the
11 national, you know, conversation in relation to the
12 Mueller report.

13 Q. Have you read the indictment in the case
14 United States versus -- I'm going to definitely botch
15 this pronunciation, Natyksho, N-a-t-y-k-s-h-o, filed
16 in the District of the District of Columbia last
17 year.

18 A. I have not.

19 (Plaintiffs' Exhibit 29, USA vs. Netyksho,
20 et al. Indictment, marked for identification.)

21 Q. (By Ms. Bentrrott) I would like to hand you
22 that indictment which I will mark as Exhibit 29.
23 Feel free to peruse the whole thing if you like. But
24 I will direct you to a specific paragraph. You can
25 tell me whenever you are ready.

1 On page 26, paragraph 75, and the second
2 sentence in this paragraph reads: For example, on or
3 about October 28th, 2016, Kovalev and his
4 co-conspirators visited the websites of certain
5 counties in Georgia, Iowa and Florida to identify
6 vulnerabilities.

7 Do you see that?

8 A. I do.

9 Q. You had not read this before?

10 A. I had not.

11 Q. Were you aware of this fact prior to our
12 discussion right now?

13 A. I believe I have heard conversation within
14 the elections division pertaining to this.

15 Q. What can you tell me about those
16 conversations?

17 A. I can just say that I have heard the
18 elections director and members of the general counsel
19 for the Secretary of State's office mentioning this.

20 Q. Do you recall any other details?

21 A. I do not.

22 Q. Does this information -- has this
23 information affected the Secretary of State's
24 office's plans or protocols with respect to election?

25 A. It has not changed the operations of my

1 division within the Secretary of State's office. Has
2 it changed other aspects within the election
3 division? You would have to ask other people.

4 Q. You are not aware of any changes within the
5 elections division?

6 A. I do not know what they have or have not
7 done in response.

8 Q. What investigation has been undertaken, if
9 any at all, regarding possible election interference
10 in Georgia?

11 A. That would be a question to ask of the
12 elections director and the chief investigator for the
13 Secretary of State's office. I do not know.

14 Q. What are their names?

15 A. Chris Harvey is the elections director and
16 Russell Lewis is the chief investigator.

17 Q. You are not aware of any such
18 investigation?

19 A. I am not.

20 Q. Have you read the findings and
21 recommendations of the Senate Intelligence Committee
22 regarding election security from last year?

23 A. I have not.

24 Q. I would like to hand you, fortunately, just
25 a summary of those findings, not the entire thing, we

1 don't have all day. I will mark this as Exhibit 30.

2 (Plaintiffs' Exhibit 30, Russian Targeting
3 of Election Infrastructure During the 2016
4 Election: Summary of Initial Findings and
5 Recommendations, May 8, 2018, marked for
6 identification.)

7 Q (By Ms. Bentrott) And feel free to read the
8 whole thing. I'm particularly interested in the
9 summary of initial findings on the first page.

10 A. Okay.

11 Q. And you said you haven't read this document
12 before, correct?

13 A. That's correct.

14 Q. And you can see in the first sub-bullet
15 under the summary of initial findings, it says: At
16 least 18 states had election systems targeted by
17 Russian-affiliated cyberactors in some fashion.

18 Do you see that?

19 A. I do.

20 Q. Were you aware of this finding?

21 A. Again, I have heard this through general
22 conversation within the elections division.

23 Q. What can you tell me about those
24 conversations?

25 A. That I have heard that they were talking

1 about election findings of this nature.

2 Q. Nothing further?

3 A. To what extent -- no.

4 Q. Do you recall feeling a sense of concern?

5 A. My concern in the time frames of elections
6 is about getting the databases built and getting the
7 ballots produced. During election years, my blinders
8 are on in getting the ballots constructed and getting
9 ready for Election Day.

10 Q. And you can see the second bullet says:
11 Almost all of the states that were targeted observed
12 vulnerability scanning directed at their Secretary of
13 State websites or voter registration infrastructure.

14 Do you see that?

15 A. I do.

16 Q. Were you aware of this finding?

17 A. That finding, I do not know.

18 Q. And neither of these findings have changed
19 your operations in any way; is that correct?

20 A. That is correct.

21 Q. Do you receive classified threat briefings
22 from the Department of Homeland Security?

23 A. I do not receive them.

24 Q. Do you receive classified threat briefings
25 from any federal agency?

1 A. I do not.

2 Q. Other than Merritt Beaver, are there any
3 other individuals you can identify who are
4 responsible for the cybersecurity of Georgia's voting
5 system? At least at the state-wide level.

6 A. Right. I mean, Merritt Beaver is the CIO.
7 And the elections director for the State of Georgia
8 is Chris Harvey. And then finally the secretary of
9 state is the official director of elections for the
10 state. So ...

11 Q. Are there other individuals who you would
12 identify that are responsible for the physical
13 security of the system as opposed to the
14 cybersecurity?

15 A. The counties themselves are responsible for
16 the voting equipment that -- that the voters
17 themselves touch. They are under governmental
18 agreement with the Secretary of State's office to
19 maintain and secure the voting equipment that's used
20 by voters on Election Day.

21 So the direct access to the equipment that
22 a voter would interact with is under the county
23 purview and county supervision.

24 Q. What is included among that equipment
25 besides the DRE machines themselves?

1 A. The GEMS computer at the county level. The
2 optical scan units that are used. The Express Poll
3 devices that are used. The DRE equipment that is
4 used. Anything that the county uses to execute the
5 election, their paperwork, their signs, their forms,
6 so much of that stuff. All of that stuff is
7 something that the county protects and holds onto.

8 Q. But to clarify, of that list, is there
9 anything that the -- that voters actually use and
10 interact with on Election Day other than the DRE
11 machines?

12 A. The voter touches the DRE machine. The
13 voter touches a voter access card. The voter doesn't
14 touch Express Poll. A poll worker touches Express
15 Poll. So the two items that a voter touches directly
16 are the voter access card and a DRE machine.

17 Q. What is the physical infrastructure that
18 the Secretary of State's office is responsible for at
19 any point in the chain of in the election?

20 A. We maintain the system that creates the
21 database that's used at the county level for
22 elections operations. That is a statutory
23 requirement under the code that we construct the
24 database for use of federal, state, and county
25 elections.

1 We also construct the data set that's used
2 for Express Poll to populate their ePoll books.
3 So -- but from a physical device unit, that is all
4 maintained locally at the county level.

5 Q. What about the memory cards that are used?

6 A. My apologies.

7 The Express Poll compact flash cards, we do
8 retain those post-election and hold onto those in
9 election, hold onto them between election. So we put
10 the data file on them. Then they are in the county
11 hands through the handoff. Then after the election,
12 another handoff takes place and those memory cards
13 come back to the Secretary of State's office where
14 they are held.

15 Q. How do those handoffs take place?

16 A. Through SOS investigators.

17 Q. Do you recall any of their names?

18 A. I don't know all of their names, but they
19 are all employees at the Secretary of State's office
20 and carry a badge.

21 Q. And when -- when they are stored at the
22 Secretary of State's office, what can you tell me
23 about how they are stored?

24 A. They are stored under lock and key. The
25 bag itself is -- with the cards in it still remain

1 locked and the room in which the cards stay is all
2 card key-accessed.

3 Q. Do you know how many people have access to
4 that room?

5 A. There's myself. Let's see, myself. Five
6 total people.

7 Q. Does that include any custodial staff that
8 may or may not have access to that?

9 A. No. No, it does not.

10 Q. Does custodial staff have access to --

11 A. Custodial staff can only get into the
12 building if we let them in the building and they
13 cannot get into that room because we don't let them
14 in that room.

15 Q. Another dirty room?

16 A. That room has got a lot more -- yes, that
17 one is dirtier than the regular parts of the office.

18 Q. Understood.

19 Are there any other physical parts of the
20 system that the Secretary of State's office is
21 responsible for at any point in the chain?

22 A. I cannot think of any others that I have
23 not mentioned.

24 Q. If any hardware is broken and in need of
25 repair, who is responsible for conducting those

1 repairs?

2 A. If a touch screen unit does -- does not
3 work, then the county sends that equipment back in to
4 repair to the vendor and the vendor does a repair of
5 the equipment. And then after the repair work is
6 done by the vendor, that equipment is shipped to the
7 Secretary of State's office for acceptance testing.

8 And that is where it is confirmed that not
9 only is it operational, but that the right software
10 versions are installed on the devices that are
11 certified for use within the State.

12 Once that certification testing is
13 completed, then the equipment is then returned to the
14 county for the county to then reintroduce into
15 their -- into their inventory and supply.

16 Q. And so in such a instance, the Secretary of
17 State's office would have possession, control of, for
18 example, a DRE machine that would be going back to
19 the county for use at some point.

20 A. Correct. For a, for a short period of
21 time, yes.

22 Q. About how much time?

23 A. We try to -- whenever we have equipment
24 delivered, have it delivered one day and have it
25 ready for shipping to the county by the next day. So

1 then 24, 48 hours, it's ready to go back to the
2 county.

3 Q. Is it stored -- where is it stored?

4 A. Stored in a -- stored within our office
5 which again is all card key-accessed. It's stored --
6 records are kept that it's come in, serial numbers, a
7 record of when we last touched it, for what reason.
8 All of that is stored within our system. And then
9 also the physical units stored again in card key
10 access rooms.

11 Q. And same access for this --

12 A. Yes, and there's also cameras in the
13 building that -- and everything has got security
14 access points and such.

15 Q. And to do such testing, would you also --
16 would you need memory cards or voter access cards or
17 other sort of removal of media?

18 A. Yes, yes.

19 Q. Is that removable media, would that come
20 with the machine and be delivered by the vendor or is
21 that --

22 A. That stays within the Center for Election
23 Systems as used saying that this has -- the database
24 that we need for the operational use that we need for
25 stays there controlled within that center.

1 Q. So, in general, on an ongoing basis, the
2 Secretary of State's office does possess some amount
3 of voter access cards and memory, DRE memory cards
4 and things of that nature.

5 A. Uh-huh, yes. We do.

6 Q. Can you estimate sort of the -- well, let's
7 step back.

8 What is the full scope of those types of
9 devices that the Secretary of State's office has
10 regularly in its possessions?

11 A. The devices that accounting need to execute
12 an election are devices that Secretary of State has
13 in order to do testing on the same said equipment.

14 Q. I see. So you have everything that the
15 counties have.

16 A. Uh-huh.

17 Q. Just in some smaller amount.

18 A. That is correct.

19 Q. For the purpose of testing.

20 A. That is correct.

21 Q. And is that all stored in the same room
22 as -- that you described the Express Poll flash cards
23 being stored in?

24 A. It is stored in a different room, but card
25 key-accessed.

1 Q. And same access to that room?

2 A. Uh-huh, same.

3 Q. What can you tell me about access of the
4 vendor to DRE machines, for example? Who has access
5 when a machine is out at a vendor, say, for example,
6 for repairs?

7 A. That -- the vendor has a particular
8 operations setup for receipt of equipment, who comes
9 in contact with equipment. That's all documented and
10 notated within their recording structure.

11 And then when we get a unit returned from
12 repair, we get a sheet that says, here's who touched
13 the equipment, here was the operation that was
14 reported by the county, here is the repair work that
15 was done by the technician locally by the vendor.

16 We hold that, and we actually return that
17 paperwork back to the county because it's the county
18 that's possessing the equipment in the end run. So
19 we see the -- we see the paperwork, we don't keep the
20 paperwork, we forward it on to the county.

21 Q. You read my mind with that question. Since
22 you don't copy the paperwork --

23 A. That's correct.

24 Q. -- you have no record at the SOS office.

25 A. Right. We keep a record electronically

1 that says the equipment was turned in this day, it
2 was tested on the this day and whether it either
3 passed or failed.

4 If it failed, we do create a record copy
5 that says it failed. We also keep a record copy that
6 it passed that indicates that we tested on a certain
7 day, that it passed, and it has a tape that prints
8 out from the device showing what we did.

9 Q. Under what other instances does the vendor
10 have access to the voting machines?

11 A. If a local jurisdictions contracts with a
12 vendor for support in preparing the equipment for --
13 during logic and actually testing prior to election.
14 That would be an opportunity for the vendor to have
15 access to the equipment which would be under the
16 supervision and guidance of the elections official.

17 Q. Any other circumstances?

18 A. On some jurisdiction's contract with the
19 vendor to have a member of the vendor onsite to
20 assist with election night. Operations, again, all
21 done through the supervision of the county election
22 official.

23 Q. Any other circumstances?

24 A. I can't think of any off the top of my
25 head.

1 Q. How is the equipment transported from the
2 vendor to the Secretary of State's office?

3 A. It is shipped in multiple ways depending on
4 the number, sheer number. Sometimes it's shipped via
5 freight. Others, it's shipped via UPS.

6 Q. I would like to talk about the different
7 removable media that interact with the voting system
8 generally.

9 A. Okay.

10 Q. So we have talked about a few different
11 types. I want to make sure I understand all the ways
12 they interact and I want to make sure I'm not missing
13 anything.

14 A. Uh-huh.

15 Q. So we talked about the CD that gets loaded
16 with the databases from the GEMS, from the
17 ballot-building computers.

18 A. Uh-huh, uh-huh.

19 Q. And that -- those CDs get transported to
20 the counties, correct?

21 A. Uh-huh, correct.

22 Q. And another one we talked about is the
23 write lock USB drive that you have used --

24 A. Uh-huh.

25 Q. -- to upload databases from the same

1 system.

2 A. No -- when we take databases from the
3 ballot-building environment and move them over to the
4 Epic environment for use there.

5 Q. Okay. Are there any other removable media
6 that interact with the ballot building computers or
7 server?

8 A. At the Center for Elections, at SOS?

9 Q. Uh-huh, yes.

10 A. Not that I can think of. Is that we --
11 with the ballot builder server we have that dedicated
12 jump drive that moves files for ballot building
13 purposes or for Epic purposes because everything
14 stays within the server in production of the CD.

15 But we do have to move it from -- and
16 actually we just move it from folder to folder within
17 the current system, in the shared system. Epic and
18 ballot building are sitting in the same configuration
19 that SOS put into place.

20 So the Epic server has, has access to the
21 folder structure for its needs. And the ballot
22 builder has the same access structure for the folder
23 structures. So only one USB drive is used in moving
24 data from the ballot building CPU, the pdf files, the
25 proof files, over to the public device for upload

1 into the SOS FTP.

2 Q. Okay.

3 A. And then for Express Poll purposes, there's
4 a compact flash card that's used to take the data
5 generated by the Epic computer and that data is
6 copied to the compact flash card. That compact flash
7 card is reformatted prior to every insertion into the
8 system to make sure that that card is clean, it's not
9 containing anything.

10 Q. What can you tell me about the reformatting
11 process?

12 A. It's a process that's ran on a CPU is that
13 you isolated the drive, right click and say -- and
14 format and it goes through the process of formatting
15 the drive. And basically the way it was explained to
16 me a long time ago is that making sure all of the
17 zeros and ones are nothing but zero.

18 Q. And is this a process that you do yourself?

19 A. Yes.

20 Q. Are there any other removable media that
21 you can think of that interact with either of those
22 two servers, the Epic server or the ballot building?

23 A. I cannot.

24 Q. No smartphones?

25 A. No smartphones.

1 Q. They are never plugged in for charging?

2 A. No, no.

3 Q. Laptops?

4 A. No.

5 Q. Tablets?

6 A. No.

7 Q. And they are not -- are they entered and
8 equipped and just not enabled?

9 A. They are -- that is a question to ask SOS
10 IT on how they have configured those servers in
11 respect to that.

12 Q. And so you are not sure if they are
13 wifi-enabled?

14 A. They are not wifi'd. I have no wifi. I
15 don't have any wifi in my office. Period.

16 Q. Are you aware whether or not they have wifi
17 capability that --

18 A. That would have to be a question to ask SOS
19 IT.

20 Q. Are you aware of any remote access that the
21 vendor has to any part of the voting system?

22 A. I am not aware of any remote access that
23 the vendor has.

24 Q. You know, it just occurs to me that one
25 question that I didn't ask was in all the hardware

1 that we were discussing, does the Secretary of
2 State's office also maintain optical scanners?

3 A. We house some optical scanners again for
4 testing purposes, but -- and have held some optical
5 scanners in case of emergency that could be provided
6 to a county. I think currently we have two
7 operational optical scanners and that's it.

8 Q. And what removable media interact with the
9 optical scanners?

10 A. A -- it's a memory card.

11 Q. Okay.

12 A. It's a removable memory card.

13 Q. And so you have access to those as well?

14 A. Yes.

15 Q. Is there any other removable media that
16 interact with the optical scanners?

17 A. No.

18 MS. BENTROTT: Let's see, how long have we
19 been going?

20 THE VIDEOGRAPHER: About 56 minutes.

21 MS. BENTROTT: I'm going to change topics.
22 Do you want a break now, or should we press on?
23 Entirely up to you. And you can ask for a break
24 any time you want.

25 THE WITNESS: Let's press on for a little

1 bit longer, but I may ask for a break in a
2 little bit.

3 MS. BENTROTT: Feel free to interrupt me.
4 As long as there's a not a question pending, we
5 can take a break at any time.

6 THE WITNESS: Understand. Understand.

7 Q (By Ms. Bentrott) Are you aware of any
8 security breaches of the Georgia voting system?

9 A. I am not.

10 Q. Any lapse in security?

11 A. I am not.

12 Q. Any failures in security protocol?

13 A. I am not.

14 Q. And I'm not just speaking about current
15 ongoing issues, but any in the past.

16 A. I am not.

17 Q. Are you familiar with the circumstances
18 where Georgia voter access cards were listed for sale
19 on eBay?

20 A. I seem to remember a time where one county
21 had actually sold a file cabinet and the recipient of
22 the file cabinet opened the file cabinet and found
23 some voter access cards present and then, I believe,
24 listed them on eBay for sale.

25 And when the Secretary of State's office

1 found out about that, they, I believe, sent an
2 investigator to collect that property. And then I
3 believe the Secretary of State issued that that sale
4 of the voter access cards be brought back in to
5 Kennesaw and checked and validated and marked as
6 inspected before given back out to the counties for
7 use.

8 Q. And so is there an inventory kept currently
9 that has -- that records how many voter access cards
10 are actually in existence?

11 A. I do not have that. I know that initially
12 when the State purchased the equipment in 2002, that
13 part of that purchase agreement said that there would
14 be five voter access cards provided per device. But
15 since that time, counties have procured their own
16 voter access cards and we at CES at KSU and also
17 today have never tried to create an inventory list of
18 all the smart cards.

19 Q. That sure is lucky that someone found that
20 posting on eBay, huh?

21 A. It's -- it is what it is, I guess.

22 Q. And so would you not describe this as a
23 failure in security protocol or a lapse in security?

24 A. I would say that that was a county that
25 didn't check all the drawers in the cabinet before

1 they posted it on eBay.

2 Q. And does that not constitute a security
3 lapse?

4 A. I would say that the county didn't check
5 all the drawers and should have checked the drawers
6 more thoroughly.

7 Q. So that does not a constitute a security
8 lapse. Is that what you are saying?

9 A. I would just continue to say the county did
10 not inspect the drawers enough to see what was in the
11 drawers before they sold the device.

12 Q. Are you aware that this county was fined
13 for failure to protect their electronic voting
14 equipment?

15 A. That's my recollection.

16 Q. Are you aware of any other instances in
17 which a county was fined for failure to protect their
18 electronic voting equipment?

19 A. I'm sure the record would show that there
20 are instances where the counties have been fined by
21 the State Election Board for not doing everything
22 that they are supposed to be doing under state
23 election board rule and protecting their voting
24 system. Whether it's electronic or paper, counties
25 and jurisdictions are always being brought before the

1 state election board to make sure that they are doing
2 what they should be doing.

3 Q. Can you think of any other specific
4 instance where a county was fined for not protecting
5 their voting equipment?

6 A. I can't think of a specific one because I
7 don't go to every state election board meeting and
8 listen in to all of those. But, you know, the record
9 would stand in the notes from the reports or notes
10 from the meetings on what the state election board
11 may have done in relation to various cases that they
12 see.

13 Q. And so the state election board maintains
14 records of any such security incidents?

15 A. They keep records of all their meetings and
16 their cases that they deal with, so all that's
17 maintained as part of the record.

18 Q. Are you familiar with the vulnerabilities
19 that were reported on the eve of the November 2018
20 midterm elections?

21 A. What -- what are you referencing?

22 Q. Are you aware of any vulnerabilities in the
23 State's voting system that were discussed in advance
24 of the November 2018 midterm election?

25 A. I do not recall.

1 Q. I would like to hand you what I will mark
2 as Exhibit 31.

3 (Plaintiffs' Exhibit 31, "Who, What, Why"
4 article titled "Kemp's Aggressive Gambit to
5 Distract from Election Security Crisis." ,
6 marked for identification.)

7 Q (By Ms. Bentrott) For the record, this is a
8 "Who, What, Why" article titled "Kemp's Aggressive
9 Gambit to Distract from Election Security Crisis."
10 If you would like to take a minute to read the
11 article --

12 A. Uh-huh.

13 Q. -- so that we can discuss it, that would be
14 great.

15 A. I'll do my best to answer your questions.

16 Q. Sure thing.

17 And so were you previously aware that
18 multiple experts warned that with the particular
19 vulnerability that was reported in this article a
20 hacker could change voter's registration information?

21 A. I was made aware of some activity, you
22 know, that was being looked at in relation to the
23 State's voter registration system on the weekend
24 prior to the election. But beyond that, I was not
25 privy to any of the other communications that may

1 have been ongoing with the Secretary of State's
2 office at the time.

3 Q. Who made you aware of those activities?

4 A. I was, believe, made aware of those
5 activities on Monday morning before the election that
6 there had been e-mails between the elections director
7 and others within the Secretary of State's office
8 over the weekend. But I was not privy to those
9 e-mails.

10 Q. Do you recall who told you this on Monday
11 morning?

12 A. I honestly do not recall.

13 Q. Do you recall whether it was an oral
14 conversation or whether you received this information
15 in writing?

16 A. I -- I do not recall.

17 Q. Do you recall discussing this any further
18 other than receiving this initial information?

19 A. Right, I just don't recall.

20 Q. You're aware that experts discovered that
21 through this vulnerability, files were available
22 including network configuration files. Are you aware
23 of that?

24 A. I am not.

25 Q. Are you aware that one of the

1 vulnerabilities identified meant that to view any
2 file that runs on the My Voter page, nothing more
3 would be needed than just typing the name of the file
4 into the web browser?

5 A. I am unaware. I don't work with the My
6 Voter page, so I don't know.

7 Q. Were you aware of a second vulnerability
8 described in the on-line voter registration system?

9 A. I am not.

10 Q. Is that a system that you work with?

11 A. I do not work with the on-line voter
12 registration system.

13 Q. When you were made aware of these
14 vulnerabilities on the Monday before the election,
15 did it give you any concerns about the security of
16 the election that was upcoming?

17 A. It did -- it did not, you know, make me go,
18 you know, we have got to check something. There was
19 nothing that made me feel hesitant that the elector's
20 list that may have been produced or had been produced
21 had been -- you know, were not trusted. So there was
22 nothing that made me go, Wait, we have got to stop
23 something.

24 Q. And in response to learning of these
25 security vulnerabilities, you undertook no action to

1 check or verify the security of the system; is that
2 correct?

3 A. At that point in time, everything was
4 already out in the counties' hands for use.
5 Everything in our program had been turned in to the
6 Express Polls. There was no other data going out at
7 that point in time. They were all physically in
8 place in their sealed components. That was -- it
9 was -- it was process that was complete from -- from
10 a process of production and preparation.

11 Q. So the answer to my question is no, you
12 undertook no action after learning of the security
13 vulnerabilities prior to the election.

14 A. Correct. Correct.

15 Q. And to the extent that these
16 vulnerabilities indeed left the system open to
17 intrusion, there would have been nothing that could
18 have been done about it at that time.

19 A. Based upon my knowledge of the situation
20 which was limited at this point, again, because not
21 being engaged with these discussions, I would say no.

22 Q. I would like to hand you what's been marked
23 as Exhibit 32.

24 (Plaintiffs' Exhibit 32, Press release from
25 the Secretary of State's office entitled, After

1 Failed Hacking Attempt SOS Launches
2 Investigation into Georgia Democratic Party,
3 marked for identification.)

4 Q (By Ms. Bentrott) And this is, I believe, a
5 press release from the Secretary of State's office
6 that's titled "After Failed Hacking Attempt SOS
7 Launches Investigation into Georgia Democratic
8 Party." Do you see that?

9 A. I do.

10 Q. Do you agree that the Democratic party
11 attempted to hack the State's voter registration as
12 stated in this press release from the Secretary of
13 State's office?

14 A. I don't know what happened in that
15 situation because, again, I was not privy to any of
16 the discussions that were had within the Secretary of
17 State's office about this situation.

18 Q. So you don't know, one way or the other?

19 A. I do not.

20 Q. Do you know if there is an ongoing
21 investigation into this?

22 A. I do not.

23 Q. Do you know to the extent there is an
24 investigation who in the Secretary of State's office
25 would be responsible for this?

1 A. I do not.

2 Q. If you wanted to ask someone about this
3 issue, who would you ask?

4 A. I would petition my question to the state
5 elections director, Mr. Harvey.

6 Q. It says in the last sentence of this press
7 release, "We can also confirm that no personal data
8 was breached and our system remains secure." Do you
9 see that?

10 A. I do.

11 Q. Do you have any information about that
12 confirmation that no personal data was breached?

13 A. I do not.

14 Q. So you don't know whether it's true or not?

15 A. I do not know how the press secretary came
16 up with that quote.

17 Q. I'm going to ask you to step back and I'm
18 going to represent to you some of the testimony that
19 I recall from the preliminary injunction hearing that
20 we had in this case back in September.

21 A. Uh-huh.

22 Q. If you -- you know, if you dispute, if I
23 get any of this wrong, please let me know.

24 A. No, I understand.

25 Q. I'm not trying to trick you.

1 But I recall that you testified that a
2 voting machine virus would need to know the position
3 of a candidate in order -- in a database in order to
4 change votes.

5 A. Uh-huh.

6 Q. Do you recall that?

7 A. I don't directly recall that statement, but
8 that doesn't mean that I didn't say it.

9 Q. Do you believe that statement is correct
10 today, that in order to change votes, a hacker would
11 need to know the position of a candidate in the
12 database?

13 Excuse me.

14 A. It's, it's my position that if someone was
15 trying to alter the results that you need to know
16 where the individual candidate is positioned within
17 the table structure. That, you know, Candidate X is
18 this ID number. Candidate Y is this ID number.
19 That's my belief that if you had that information,
20 then perhaps you could write some code that could
21 reassign both vote totals based upon altered IDs.

22 Q. What is the basis, what is your basis for
23 that belief? How did you come to that understanding?

24 A. That is just my belief that if you had
25 access to that information, that you would have the

1 ability to manipulate it.

2 Q. And absent access to that information, you
3 do not have the ability to manipulate it; is that
4 your belief?

5 A. I'm saying that my belief is if you have
6 access to it, you have an ability to manipulate it.
7 Absent access to it, I am -- I don't know what
8 abilities exist to a person that may be trying to
9 hack an outcome. You know, what their skill sets
10 are. What -- you know, and so forth. So I can't
11 speak to what possibly could they design, I don't
12 know.

13 Q. Okay. So it is not your position that one
14 would need to know the position of a candidate in a
15 database in order to change the votes.

16 A. It's my position that if they had
17 information of the position, it may make their job
18 easier.

19 Q. Okay. Just to be clear for the record, it
20 is not your position that one would need to know the
21 position of a candidate in a database in order to
22 change the votes.

23 A. "I do not know" is -- is the answer to the
24 question. I do not know what may or may not be
25 needed.

1 MS. BENTROTT: I think now might be a good
2 time for a break if that works for you.

3 THE WITNESS: Sure.

4 THE VIDEOGRAPHER: The time is 4:13 p.m.
5 We are now off the record.

6 (WHEREUPON, a recess was taken.)

7 THE VIDEOGRAPHER: The time is 4:25 p.m.
8 We are back on the record.

9 Q (By Ms. Bentrott) I wanted to circle back
10 to some of our earlier conversations just to follow
11 up on some of the things I didn't completely
12 understand, if you don't mind.

13 A. Okay.

14 Q. The CD that's sent to the counties --

15 A. Yes.

16 Q. -- what file types are included on that CD?

17 A. It is a single file within a zipped folder.
18 There's only one file that's sent to the county on
19 the CD and that is a GEMS database, a dot-GBF file.

20 Q. So the dot-GBF file is the GEMS database
21 file?

22 A. That is correct.

23 Q. It's not a Microsoft Access file?

24 A. That is correct.

25 Q. What is a dot-GBF file, generally speaking?

1 A. That best way that I can explain it is a
2 Word file is a dot-DOC file. You have to have Word
3 to open a dot-DOC file. You have to have GEMS to
4 open up a GBF file. GEMS is an executable, it reads
5 a dot-GBF file. That is the -- that's the output
6 that it creates is a dot-GBF file.

7 Q. So does GEMS take the information from
8 Microsoft Access into GEMS to create the GEMS
9 database?

10 A. GEMS is like, from my understanding and the
11 way I see it in my head, GEMS is like a graphical
12 interface program where you open up GEMS, you work
13 through GEMS, and the information that you place into
14 GEMS is being placed into an Access database table
15 structure. But when you have completed the work and
16 you save the file, it is saved as a dot-GBF file.

17 Q. That really cleared things up for me.
18 Thank you.

19 Okay. So we have talked about, I think,
20 you have gone really into very helpful step-by-step
21 detail about some of the process in election
22 administration. And apologies if I'm circling back
23 on some things we have discussed. But I want to make
24 sure I understand the whole process from beginning to
25 end, soup to nuts.

1 I think we have covered for creating
2 ballots pretty thoroughly, for distributing ballots
3 to the counties. What can you tell me about the
4 entire process for programming the DREs for the
5 election?

6 A. The, again, county gets the GEMS database.
7 The GEMS database is loaded to their local county
8 GEMS computer. Once they have brought up the data
9 file, then they execute an operation within the GEMS
10 database that tells the -- the GEMS program how many
11 memory cards have to be created for the various poll
12 locations. So it's called the vote center editor.
13 Is you -- let's say that you are -- the name of your
14 polling location, your election day polling location
15 is 01J, that that's the name of the polling location.

16 You would open up that polling location and
17 change its number of memory cards equal to however
18 many DRE machines you intend to use for that
19 location. When the -- when the database is sent to a
20 jurisdiction, it is at the default setting of one.
21 Because we don't know when we are building the
22 database how many, how many devices a -- a
23 jurisdiction plans to use in a given location.

24 So the county themselves go in and update
25 that information within the database to say X number

1 of memory cards for this location, X number of memory
2 cards for this location. And they go through all of
3 their locations, whether they have one polling
4 location or 300 polling locations, they have to go in
5 and update those numbers. And that creates a listing
6 of memory cards to be created.

7 Then in order to create the memory card, a
8 touch screen has to be connected to the GEMS
9 computer. An optical scan unit has to be connected
10 to the GEMS computer. And counties normally have a
11 specific touch screen connected to the server or
12 touch screens connected to their GEMS computer in
13 a -- in a permanent state. They use that device
14 solely to create memory cards. They don't use it for
15 anything else.

16 And same thing goes for the optical scan
17 unit. The optical scan that's connected to the
18 server is there to create the needed memory cards.
19 Once the -- as the memory card is created, a label is
20 generated that outlines what machine ID that touch
21 screen will now be. The machine ID is like the
22 memory card.

23 The memory card, zero is the first memory
24 card created in a polling location. Memory card ID
25 two, or one is like the second card created. So the

1 numbering sequence starts at zero as opposed to one.

2 Q. Very European.

3 A. So if you have 10 cards for a location, its
4 memory ID is zero through nine.

5 Once those memory cards are created, then
6 the memory cards have to be placed into a DRE unit.
7 Before the memory card is placed into the DRE unit, a
8 jurisdiction normally will write on the label that's
9 attached to the memory card the serial number of the
10 DRE that that memory card is being inserted into.

11 So that if something were to happen to the
12 memory card, we could always go back to that specific
13 machine and collect information from the machine
14 directly if something happened to the memory card.

15 And what I mean by to the memory card is
16 that it became damaged in transport post-election or
17 it just became unreadable, you can always go back to
18 the archive memory on the touch screen itself and
19 collect the same information that had been saved to
20 the memory card.

21 Memory card is placed into the DRE. Memory
22 card is placed into the optical scan unit. And then
23 the county goes through their logic and accuracy
24 process where they test the functionality of the
25 equipment, but also validate the look of the ballot.

1 They have seen the ballot in optical scan through the
2 approving process. The process is the first time to
3 see the process on the touch screen.

4 While our operation at the Secretary of
5 State's office has seen the ballot and it felt like
6 it's in good shape, the county may see something that
7 our eyes did not see once they see it at the county
8 level. If they see that, they can be in contact with
9 us to see if it's something that we need to address.
10 Or if it can be addressed based upon, you know, what
11 the issue is.

12 One issue may sometimes be just the size of
13 a question is -- the county may ask the question of
14 like can that -- does that question have to go
15 between two pages or two screens. Can you do
16 something to get it into one screen. Something like
17 that.

18 Whereas, when we see it in our, in our eyes
19 in the Secretary of State's office, the two screens,
20 it's fine with us. But the county may see it and
21 say, Oh, no, that's going to impact the election. We
22 need to try to get that scaled down. Is there
23 anything you can do to help us?

24 So counties go through their testing review
25 of the ballots on review of the operations. Once

1 they have completed their testing then the equipment
2 becomes sealed and stored and ready for transfer
3 to -- or transport to the polling, polling, polling
4 office. The DRE is transferred to the advance voting
5 location for advance voting. DRE transferred to the
6 polling locations for the election stay.

7 The optical scans stay normally within the
8 election office because they're used to process mail
9 and absentees and also provisional balloting. And
10 that's all done centrally within the elections
11 office. The optical scan does not have to be
12 transported to a polling place.

13 Q. That was so much helpful information, thank
14 you. I'm going to have some follow-up questions on
15 all of this, so I appreciate your patience with me.

16 The memory cards that are created, how does
17 the county obtain those? Is that up to them or is
18 that something that they get from the State?

19 A. Memory cards are maintained by the county.

20 Q. And so they -- do you know what kind of
21 memory cards are they are?

22 A. They are -- they are PCMCIA memory card.

23 Q. Do you know where the counties, from where
24 the counties acquire the memory cards?

25 A. The memory cards came with the devices. So

1 when the State originally procured the equipment in
2 2002, the State procured the equipment and two memory
3 cards per device. A 128-megabyte memory card and a
4 64-megabyte or a 48-megabyte memory card. Since that
5 initial distribution, counties have procured
6 additional memory cards from the vendor. All the
7 memory cards are procured from the vendor.

8 Q. Okay. And you mentioned something about
9 creating the labels. How are the labels created? Is
10 that a software program that does that?

11 A. The labels are printed out from the touch
12 screen unit that the -- when -- when GEMS -- when you
13 create the memory card, or when you transfer data to
14 the memory card from the GEMS computer, you have to
15 use a touch screen for the memory card to be inserted
16 in. And then GEMS loads the information through the
17 touch screen onto the memory card.

18 When that writing process completes, the
19 onboard printer on the DRE prints out a label tape
20 that is then removed and made available to be then
21 attached to the memory card when it's removed from
22 that device.

23 Q. So the DRE prints out a label?

24 A. It prints out a label at the time of
25 completion of the generation of the memory card.

1 Q. And so the single DRE that's used for
2 making all of the memory cards will do this process
3 for each one?

4 A. That is correct.

5 Q. You mentioned something called a vote
6 center editor.

7 A. Uh-huh.

8 Q. Is that -- is that software? What is that?

9 A. That's just a -- a -- it's one of the
10 operations within GEMS. Is when you are like editing
11 text on a ballot, it's a race editor. If you are
12 changing the name of a vote center or changing its
13 count method from touch screen to optical scan,
14 that's something that's done in the vote center
15 editor.

16 Q. Are there any other changes that are
17 routinely made to the GEMS database at the county
18 level besides the ones you mentioned?

19 A. The county will enter in active voter
20 registration numbers so that the system can calculate
21 voter turnout percentages once it starts receiving
22 ballots cast back from the DREs and the optical
23 scans.

24 When the databases are sent to the
25 counties, registration is still ongoing. So we don't

1 know what the final total number of active voters is
2 for the various combos within the database. So
3 that's a number that the counties themselves enter
4 in.

5 Q. Anything else?

6 A. I cannot think of anything else that the
7 county is doing with the database at -- once they
8 receive possession of it.

9 Q. And so you mentioned for example that after
10 the county looks at that touch screen for the first
11 time, and they may want to see some changes, are
12 those changes that the county would administer based
13 on their own manipulation of the database --

14 A. No.

15 Q. -- or is that something that would go
16 back --

17 A. That would come back to the Secretary of
18 State. If it's -- if it's altering how the system
19 may be displayed, then that's something that comes
20 back to the State for a new version of the database
21 to be produced and forwarded to the county.

22 Q. And then the process, the current process
23 would be the same then.

24 A. Yes.

25 Q. In just another iteration.

1 A. Yes, yes.

2 Q. And so the database would be updated, keyed
3 in manually at the Secretary of State's office --

4 A. Uh-huh.

5 Q. -- and then sent by secure FTP back to the
6 county?

7 A. No, it would be physically delivered to the
8 county.

9 Q. Physically -- on the CD that's encrypted.

10 A. Yes, yes.

11 Q. Understood.

12 You said that there might be an instance
13 where some of the memory cards might be unreadable.
14 Can you recall any instance where that has happened?

15 A. We have had situations where the county
16 poll officer will -- in the closing procedures you
17 have to do a certain sequence of events where when it
18 is finished printing a tape, it will say, you know,
19 Do you want to print another? Yes or no. And they
20 will hit no and then it starts ending the election
21 and transitioning from mode to mode.

22 Sometimes during that process, they remove
23 the memory card too quickly. It's actually in the
24 process of still completing a write cycle to the
25 memory card. By removing that memory card, they may

1 have then made that memory card corrupt at the last
2 line within the file. So then when you put it back
3 into another touch screen to access the data, it says
4 I can't read what's on the card.

5 This normally happens after the tape has
6 already been printed out from the device. But what
7 we do in that circumstance is we go through a
8 recovery process where you can go back to the DRE
9 itself and recover the archived file that's also
10 saved to the device. When a vote is cast, when an
11 election is loaded, it's saved twice. It's saved to
12 the memory card, but it's also saved to a backup
13 location on the device itself.

14 Q. I love when you anticipate my questions.
15 That's exactly what I was going to ask. So that
16 brings me to another question, which I was going to
17 come to later, but I might as well ask it now.

18 The backup file that's saved on the DRE
19 machine, for how long is that saved?

20 A. The way that the vendor has made the
21 explanations to us through questioning through the
22 years, is that when it gets to a size capacity where
23 it can't load the next election, then it finds the
24 oldest record in storage and removes that file in
25 order to create available space. So the oldest files

1 are the first to be removed.

2 Q. This is an automatic function?

3 A. This is an automatic function.

4 Q. Do you have any estimate as to, sort of,
5 how many elections' worth of data can typically be
6 stored on one of these DREs before they start auto
7 deleting?

8 A. The file itself that's retained is
9 kilobytes -- not kilobytes -- is in just bytes of
10 size. It's a very, very small file. So I was right.
11 It's kilobytes, not megabytes. Kilobytes in size.

12 So it takes a long time for that memory to
13 be impacted. I don't know the total estimate of how
14 much storage is there, so I couldn't give you an
15 estimate of how long.

16 Q. Are the memory cards that are placed in the
17 DREs different from the memory cards that are placed
18 in the optical scan units?

19 A. Yes.

20 Q. Are they like physically different types of
21 memory cards?

22 A. Yes.

23 Q. What's the type of memory card that's used
24 in the optical scan?

25 A. It's an older classification of a flash

1 memory card, but it has to have on it a battery to
2 maintain a power source. The touch screen memory
3 cards do not need that additional power source to
4 maintain data on them, so it's just a -- it's a newer
5 generation of flash media.

6 Q. Do you know the name of it?

7 A. I don't know the name of it.

8 Q. It's provided by the vendor?

9 A. Yes.

10 Q. Okay. We have covered some of this
11 already, but I think I just want to get it soup to
12 nuts. Can you describe the process for tabulating
13 votes at the end of an election?

14 A. At the end of an election, the last voter
15 will vote in the polling location. Once the last
16 voter has voted in the polling location, then the
17 poll workers begin their closing procedures of the
18 voting equipment within the polling location. They
19 have a specific -- it's called a supervisor card.
20 And it's so labeled. It's not yellow, it's green.

21 And they take that supervisor card and
22 insert it into the DRE machine and insert a passcode
23 that the machine is -- is anticipating. If they
24 don't put the right code in, they can't go any
25 further. Once the code is accepted by the machine,

1 then -- the voter access, the supervisor card is
2 ejected and the poll worker has the option then to
3 end the election on the device.

4 When they select end election, it then
5 produces a tape for that machine that indicates what
6 that machine collected. It gives a summary of
7 totals. It says, Here are the races that were on
8 this machine and here are the collected results by
9 candidate within each race.

10 Once that tape finishes printing, the poll
11 worker gets -- does remove that tape, and that tape
12 is attached to the zero tape that was printed at the
13 morning opening procedures. A zero tape was printed
14 at opening and signed and left attached to the
15 device. And then a closing tape is at the bottom end
16 of that tape, removed and signed by the polling
17 officers.

18 After that tape is printed, the touch
19 screen asks them if they would like to print another
20 copy and the answer is yes. So they would print a
21 second copy of the results. When that tape finishes
22 printing, they remove it, sign it. It's signed in
23 triplicate. And then they are asked again, Do you
24 need another copy? And the answer is yes. So the
25 third copy is produced from each -- and this process

1 repeats itself in every touch screen device used in
2 the polling location.

3 Q. Sorry to interject, but it's the supervisor
4 that does this on every machine?

5 A. Yes, it's the poll manager is probably more
6 what they are phrased too, is the one that's in
7 control of that supervisor card. And normally that
8 supervisor card is in a sealed envelope. Because you
9 don't need that supervisor card for operations from
10 the opening. You don't need that supervisor card
11 during election day use. You just need it in order
12 to end the election on the device at the close of
13 polls.

14 Once they have completed closing and
15 printing out the various tapes from the individual
16 machines, they can then power the machines off. Once
17 the machines are powered off, they then remove the
18 memory card. And those memory cards are placed into
19 whatever apparatus the county provides the poll
20 worker to secure those cards. The cards and the
21 tapes. There's a tape that's posted at the polling
22 location, but the other two tapes are to be returned
23 with the cards to the elections office.

24 While this is all ongoing, they are also
25 doing their reconciliation work, looking at the

1 number of voter certificates that have been
2 completed. Looking at the number of voters marked on
3 the Express Poll. They have also recorded down the
4 total number of ballots cast on each individual DRE
5 machine as part of their reconciliation process.

6 Once they have completed that entire
7 process, then the poll manager and another member of
8 the poll team in most cases, county instructs poll
9 workers how to do this. Then collect the materials
10 that are to be returned to the elections office on
11 that night and then proceed back to the elections
12 office.

13 The elections office then collects that
14 information back from the poll officers when they
15 arrive. They, they do whatever they do in a chain of
16 custody environment to account for, okay, I was
17 expecting this to come back, this has now been
18 received and now I have possession of it and you
19 are -- you are good for your -- you have done what
20 you needed to do.

21 The county then will find the memory cards
22 in that packet and bring them into the GEMS area,
23 wherever the GEMS computer is. And then they start
24 the upload of those memory cards into GEMS. Before
25 they do the first upload into GEMS, after 7:00 p.m.,

1 or the close, the close of polls, they are going to
2 print out a report from GEMS to confirm that it's
3 also at zero just as the touch screens were at zero
4 during opening to validate that there are no election
5 results existing in the database prior to the first
6 memory card being uploaded.

7 Then they begin the upload process and the
8 upload process is transferring data, not results, but
9 data. Transferring data from the memory card into
10 GEMS and then GEMS is calculating the total itself.

11 And -- but GEMS is calculating all the
12 various locations together, so it's -- GEMS says you
13 have 10 cards outstanding for this location. You
14 have six cards. And it starts reading and saying,
15 Okay, I have that card now. I have this card now.
16 Here's what's been collected. And then periodically
17 through the night, the election, the county elections
18 office is stopping the upload in order to produce
19 reports that can be distributed to the public for,
20 you know, showing their progress in the tabulation
21 process.

22 Optical scan-wise, the mail-in absentee
23 ballots have been returned from the registrar. And
24 the county election officials begin the process of
25 opening the outer envelope, removing the inner

1 envelope, opening the inner envelope, removing the
2 ballot and then getting the ballots stacked however
3 they may want to stack them so that they can then be
4 processed through the optical scan devices.

5 Once they have finished processing a -- you
6 know, a set of ballots or completing the process,
7 they then send a what's called an ender through the
8 optical scan device and the ender card tells the
9 optical scan device, the election's ended, you can
10 print a tape now. So the optical scan then prints
11 out a tape and it shows the results calculated -- you
12 know, collected by that device through the scanning
13 process.

14 And, again, three tapes are printed and
15 then that memory card is removed and brought over to
16 the GEMS environment where it is also uploaded.

17 Q. Okay. Amazing. So the ender card --

18 A. Uh-huh.

19 Q. -- is that -- is that like a paper ballot?

20 A. Yes, yes.

21 Q. So it's not like a memory card?

22 A. It is -- it is a physical piece of paper.

23 Q. And the stacking of the ballots to process
24 through the optical scan, is that because the optical
25 scanner can process multiple ballots at once?

1 A. It's because the optical scanner is
2 actually limited in its memory size. When -- an
3 example would be in Fulton County. The absentee
4 location, the absentee has to have all precincts
5 assigned to it. Because anybody can vote absentee.
6 And we have to count votes by precincts within the
7 State of Georgia at the absentee level.

8 So Fulton County has over 300-plus
9 reporting precincts, precincts. But an optical scan
10 memory card can only hold up to 22 reporting
11 precincts at a time. So Fulton County has to create
12 a memory card that handles one through 22. And then
13 a memory card that handles precincts 23 through 44
14 and so forth and so on until they get all of their
15 precincts accounted for.

16 So when the ballots are received back in
17 the elections office, they have to remove the ballot
18 from the envelope and there are identifiers on the
19 ballot at the bottom that tells you what the
20 reporting precinct is that that ballot is assigned
21 to. So they have to stack the ballots by certain
22 combinations of precincts because that scanner can
23 only read those ballots.

24 And this scanner over here can only read
25 this other set of ballots and so on forth and so on.

1 So that's why they have to organize the ballots
2 before they start scanning the ballots.

3 Q. Do you have any understanding of how fast
4 the optical scanner can process certain number of
5 ballots?

6 A. Well, it processes one ballot at a time.
7 Because the ballot is fed one ballot at a time. So
8 how quickly that ballot is processed is a matter of
9 how long is the ballot, how complicated is the
10 ballot. But it's a matter of feeding that ballot
11 one, one feed at a time.

12 The scanners that the counties have as part
13 of the State's system are all classified as precinct
14 count, precinct scanners. And they are designed to
15 be -- they were actually designed to be at the
16 polling location on Election Day and be fed by the
17 voter directly. But when the State procured this
18 system, there was no central scanner available, it
19 was only these precinct level scanners.

20 So we have been able -- we have been using
21 a precinct level scanner in a central scanning
22 capacity.

23 Q. And people also vote absentee on DRE
24 machines, correct?

25 A. That is correct.

1 Q. And I might have missed it. Did you
2 mention the process by which those -- the -- the DRE
3 machines are -- the results are tabulated at the end
4 of the election?

5 A. It's the same process. The last date that
6 they are used is the Friday preceding the election.
7 So on the end of that day, the county simply records
8 the last public count number on the device. Closes
9 the -- close -- turns the machine off. They don't
10 end the election. Because if you were to end the
11 election, it would print out a tape. And knowing
12 results before Election Day, that's not allowed under
13 the code or under the rules.

14 So counties power the machines off, close
15 and seal the machines. And then those machines are
16 brought back to the elections office where the GEMS
17 system is and held, and held onto by the county so
18 that when 7:00 o'clock happens on election night,
19 they can break the seals, open the devices up, power
20 them back on and then end the election on those
21 devices.

22 Once they have completed ending the
23 election on those devices and gotten the necessary
24 tapes, then it's the same close procedures as it is
25 in election polling locations.

1 Q. Are there state-wide processes or
2 regulations for how those absentee DREs are stored
3 and secured during that time period between the
4 Friday before Election Day and when the seals are
5 broken --

6 A. There are state election board rules in
7 place that counties have to follow in regards to
8 maintaining the equipment during the elections
9 operation.

10 Q. And do you know what those are, do you
11 know --

12 A. I don't know the specific site code.

13 Q. Understood.

14 The poll manager card that has a
15 supervisor -- is that the card that has a supervisor
16 code or are they two different things?

17 A. The, the green supervisor card does have a
18 code associated to it, yes.

19 Q. Is it a code that's sort of electronically
20 embedded or is it written on it?

21 A. It's within the smart chip.

22 Q. And so how is that code written into the
23 smart chip?

24 A. That's done periodically by the Secretary
25 of State's office, is that the supervisor cards are

1 collected or the county is bringing those supervisor
2 cards back into the State and then the State updates
3 that, that code, puts a different code on there for
4 the next round of elections operations.

5 Q. And so this is done between every election?

6 A. It's not done between every election. It's
7 done sort of on a two-year cycle.

8 Q. Are all counties done at once or are they
9 kind of staggered?

10 A. We try to do them all at once, but because
11 of the election calendar and how many are coming in,
12 it sort of takes about a six-month period to get them
13 all done.

14 Q. So you said that it's placed, it's normally
15 placed in a sealed envelope until the close of an
16 election; is that correct?

17 A. Uh-huh, uh-huh.

18 Q. Is that required or that's just common
19 practice, to your knowledge?

20 A. I believe that is outlined in the SEB
21 rules.

22 Q. And so if, if a single supervisor card is
23 reused in multiple elections over a two-year period,
24 is there -- what is the life cycle of that card, so
25 to speak? If it somehow ends up in sealed envelope

1 and then gets used and then is saved again until
2 Secretary of State's office takes it back?

3 A. Yes, because it's possession of the county.
4 So the county is accounting for those cards after the
5 election and making sure that they got -- as part of
6 the supplies that are being accounted for
7 post-election.

8 Q. And so --

9 A. They know what went out pre --

10 Q. How do they get in the sealed envelope?

11 A. That's all the county's preparation of
12 supplies, poll worker supplies.

13 Q. And do you know anything about where they
14 are stored or how they are stored?

15 A. Each county maintains that themselves.

16 Q. Understood.

17 I recall you said something about voter
18 certification being completed. Do you recall that?
19 Voter certificates.

20 A. Yes. Okay. Yes. Voter certificate, yes.

21 Q. What are the voter certificates?

22 A. Voter certificate is a form that a voter
23 completes when they enter the polling location prior
24 to -- prior to present themselves at the -- at the
25 Express Poll. It is where a voter indicates if it's

1 a primary perhaps, whether they intend to select a --
2 request a Democratic, Republican or nonpartisan
3 ballot.

4 It also contains the oath that a voter
5 adheres to in relation to, you know, my vote is not
6 for sale and so forth, information. Basically it
7 collects the signature of the voter. That is -- and
8 the voter certificate, the completed voter
9 certificate ends up being the official record of who
10 participated in the polling location during that day.

11 Q. Is this a paper document or is this
12 something done electronically?

13 A. That is a paper document.

14 Q. Is this paper document the same state-wide
15 or are there county or precinct specific versions of
16 this document?

17 A. I believe that all voter certificates are
18 the same. That is a supply that's supplied to
19 counties by the Secretary of State's office.

20 Q. Do you know what the cost is of preparing
21 the voter certificates?

22 A. I do not. I do not.

23 Q. Are you involved in the design, printing,
24 ordering or distribution of voter certificates?

25 A. I am not.

1 Q. What is your understanding of the process
2 for collecting the voter certificates at the end of
3 the election?

4 A. My understanding is that the certificates
5 as they are collected are placed into a binder and
6 they are placed in sequential order.

7 Q. Then what happens to them?

8 A. That they are retained and brought back as
9 part of the poll supplies that the poll officer is
10 required to bring back post-election from the polling
11 location.

12 Q. Are they retained ultimately by the county
13 or by the State?

14 A. By, I believe, the county. That's part of
15 the official record that is maintained by the county.

16 Q. Does the State ever take possession of
17 those?

18 A. I do not believe so, no.

19 Q. Can you describe for me the -- from soup to
20 nuts, the processes for post-election reporting?

21 A. In what way?

22 Q. Once the votes are tabulated, they are
23 reported somehow.

24 A. Okay. They are basically reported in two
25 ways, through physical reports that are generated at

1 the county from the GEMS computer. Election summary
2 report, that's normally the most common report
3 generated by the county and it will be labeled as
4 unofficial and incomplete.

5 But the county user will also produce a --
6 an export file, a text file that's generated from the
7 GEMS computer that can be interpreted by the State's
8 election night reporting system. The text file is
9 generated. The county user goes into GEMS and says,
10 I need to create an export file. The export file is
11 created and saved to a specific location on the
12 county computer.

13 And then the county has a mechanism using a
14 specific USB drive that the State provided, one of
15 those lockable USB drives. That when the drive is
16 placed into the server, the first thing they do is
17 run a batch process that completely reformats the
18 drive. And then once that process is done, it copies
19 the file that's been created, the text file, and
20 places it into a zipped folder. And then the zipped
21 folder is transitioned to the USB drive.

22 The USB drive is then removed and put into
23 the locked position by the county. The USB drive is
24 then taken to a county computer that the county can
25 access the Secretary of State's election night

1 reporting system. They sign in using their user name
2 and credentials. And then they upload that zip file
3 to the states ENR system and the ENR system collects
4 the data from that and rolls that into the State's
5 electronic display of results on election night.

6 Q. So the lockable USBs that are provided by
7 the State, what types of those -- what types of USB
8 drives are those?

9 A. It's a ScanDisk four gigabyte.

10 Q. When are those provided to the counties?

11 A. Those were provided to the county years
12 ago. I would be guessing to tell you what year at
13 this point, but they have been in use in the county
14 for years now.

15 Q. So it's not like a new USB for a particular
16 election that's provided at a particular time?

17 A. That is correct.

18 Q. And you said something about reformatting
19 the drive.

20 A. Uh-huh.

21 Q. In what way is the drive reformatted?

22 A. The reformat process is run, as we spoke
23 earlier how you would isolate the drive and any data
24 that's on it through the reformatting process is
25 wiped clean. So if there's anything that's not --

1 the zeros and ones are all converted back to all
2 zeros.

3 Q. I see.

4 And you mentioned the Secretary of State's
5 election night reporting system.

6 A. Uh-huh.

7 Q. I think this is maybe the first time we
8 have discussed this today unless I'm mistaken. Do
9 you recall, have we talked about this?

10 A. No, I don't think we have.

11 Q. And so with a -- what can you tell me about
12 that system? Where, where is it housed? What is the
13 software that's used?

14 A. I can't speak a lot to that. They --
15 Secretary of State's office contracts with a vendor.
16 I believe the vendor is Scytl, that is the vendor
17 that supplies an election night reporting process.
18 So what software's in play, I just know the process
19 of creating the export file and getting it off of the
20 GEMS device over to the -- over to the computer that
21 the county does the upload.

22 From that step forward, that's all handled
23 by another section of the Secretary of State's
24 office, not mine.

25 Q. And the counties have password-protected

1 access --

2 A. Yes.

3 Q. -- to the Secretary of State's reporting
4 system.

5 A. Yes.

6 Q. But this reporting system is not housed on
7 one of the GEMS servers in your office?

8 A. It is not. It is not. It is not.

9 Q. Can you spell the name of that vendor you
10 mentioned?

11 A. S-c-y-t-l, I think that's it. It doesn't
12 have an ending -- it doesn't have a final "E."

13 Q. I'm so glad I asked. I never would have
14 gotten there. Okay.

15 What do you know about the counties'
16 processes for transporting the DREs back to storage
17 at the end of an election?

18 A. I don't know. I don't know how each
19 individual county does that. Each county is
20 different in how they process and move that
21 equipment, so I do not know.

22 Q. So that's up to the county?

23 A. That's up to the county.

24 Q. Does the State require background checks to
25 be performed on poll workers or election workers or

1 others with access to the DRE machine?

2 A. I'm not aware of a State requirement.

3 Q. Does the state have any processes or
4 procedures to ensure that those with access to the
5 DRE machines are not security risks?

6 A. I do not know of any anything in place.

7 Q. As to those employees at the Secretary of
8 State's office that have access to any of the
9 hardware that's used in the elections or even in the
10 Secretary of State's office for testing and
11 validation.

12 A. Uh-huh.

13 Q. Are background checks conducted on those
14 individuals?

15 A. Yes. The Secretary of State's office does
16 run background checks, to my knowledge, on all
17 employees that the Secretary of State's office takes
18 on.

19 Q. Where do you keep the lockable USB -- is --
20 that's what you use, the lockable USB, to transfer
21 the database?

22 A. The one that I use for the Center --

23 Q. Yes.

24 A. -- it stays in my desk.

25 Q. Is it under lock and key?

1 A. Yes, it is.

2 Q. Where do you keep the key?

3 A. With me. Or actually not with me, I keep
4 it in my office.

5 Q. Where in your office?

6 A. In a separate desk drawer.

7 Q. Is that desk drawer locked?

8 A. That desk drawer is not locked, but you
9 can't get access into my office without having the
10 security key to get into that area.

11 Q. Are visitors ever permitted in your office?

12 A. Visitors are in my office, but only with
13 other people.

14 Q. And custodial staff does clean your office?

15 A. During the day, during business hours, and
16 they are not -- they don't have access into the
17 building without us being present.

18 Q. What role do you play, you or your office,
19 in designing training for administering an election
20 on DREs?

21 A. We have developed training classes in the
22 past on operations that the State has isolated as
23 what a county would be performing locally.

24 Q. Do you continue to develop training?

25 A. The system has not altered in 17 years

1 approximately. So we had a base structure of
2 training and then enhance it as years go by. Change,
3 you know, points of emphasis as we move through.

4 Q. When was the last time you changed the
5 training?

6 A. There's been a lot more talk about physical
7 security and equipment within the presentation since
8 2016 and after would be the main scope of discussion
9 within the training class. Of like the importance of
10 physical security, always being aware where your
11 equipment is, who has access to it, why do they have
12 access to it, do you have the proper location in
13 place to monitor who comes into your area where your
14 GEMS computer is, or where your voting machines may
15 be stored and located.

16 Q. And why would you say this has gotten
17 increased attention since your estimate of 2016?

18 A. Not to be -- you know, not to be, you know,
19 smart in my response, but dealing with all of these
20 circumstances that have happened since 2016. It's
21 created a more enhanced view from the Secretary of
22 State's standpoint about the importance of security.

23 Counties are -- counties run elections, but
24 the State provides guidance in those elections and
25 the State has been trying to provide more guidance to

1 the counties to make sure that they are protecting
2 that asset that they are holding onto.

3 Q. The training, it comes in the form of
4 videos?

5 A. Not anymore. All training is done in
6 person. We do not have any training videos on-line
7 of any sort. If a training class is held, it's in
8 person where either I'm instructing the class or
9 other members of the Secretary of State's office is
10 instructing the class within a facility maintained at
11 the Secretary of State's office in Macon.

12 Q. So election workers from throughout the
13 state will come to Macon to attend these trainings?

14 A. When those training classes happen.
15 Normally, it's part of the official State's Georgia
16 election officials certification process. So as new
17 election officials come onboard, they have to take
18 these training classes.

19 Part of the training classes are through
20 the elections division and they are provided on-line
21 through sessions like that. But when it has to deal
22 with equipment itself, then they have to come in
23 person, you know, Secretary of State representatives
24 is in the room discussing the equipment with them in
25 person in talking about, you know, how to use the

1 equipment.

2 Q. Are only new election workers required to
3 attend training?

4 A. They are required, but normally it's not
5 just new election officials that attend those classes
6 when they are scheduled. We have had repeat visitors
7 time and time again where they just come in for what
8 they classify as sort of a refresher on the system.
9 So they, you know, keep fresh on how to use
10 equipment, how to make sure they maintain it
11 properly.

12 Q. It would be -- it wouldn't be against the
13 protocols or the rules for an election worker who has
14 been doing this since 2005, say, to not have had a
15 training since then; is that correct?

16 A. The training classes that we provide are
17 provided to the elections office. The elections
18 supervisor, their assistant supervisor, who they deem
19 as being that person that then goes back and trains
20 the poll workers.

21 So if, you know, we have interacted with
22 every elections office at some point in time through
23 this 17 years of use of the system.

24 Q. It's possible, though, that to the extent
25 an elections office doesn't have new supervisors or

1 assistant supervisors and hasn't had any new staff in
2 the last, let's say, five years, that they haven't
3 had any trainings in the last --

4 A. Well, every election official is required
5 to attend a state-wide conference that is put
6 together by the Georgia Election Officials
7 Association. And at that conference, Secretary of
8 State is involved to participate to provide training
9 sessions to the -- to the entire state through that
10 conference on various items. Meaning like security.
11 I know that we have had -- or GEMS has had members of
12 the Department of Homeland Security come and speak to
13 its membership about maintaining security around
14 their voting systems.

15 Q. How often is that conference held?

16 A. Normally once a year. They have already
17 had the conference once this year and they are
18 already scheduled to have another conference in
19 December of this year. So we will actually do it
20 twice this year.

21 Q. Why?

22 A. Election year calendar.

23 Q. So in an election year, it's typical to
24 have this twice?

25 A. Depends on the calendar of events. But

1 they wanted to have another meeting before the first
2 state-wide election in 2020. They didn't have want
3 to have a state-wide election in 2020 and then have a
4 situation to meet with all the counties again.

5 So the organization decided we will have a
6 meeting in spring of 2019 after the legislative
7 session. But we will also have a meeting at the end
8 of the year in 2019 leading into 2020 so that if
9 there's any directives that the State may need to
10 give to the jurisdictions on execution of elections
11 in 2020, they can hear it before the first state-wide
12 election.

13 Q. Stepping back to the in-person trainings
14 that are held in Macon, are there written materials
15 that are produced by the Secretary of State's office?

16 A. The PowerPoints that are generated are
17 printed out and provided to the participants.

18 Q. And do you recall the last time that such a
19 training was administered?

20 A. I believe I spent a day in Macon earlier
21 this year with doing a training class. But I could
22 be mistaken on that, but I feel like it was earlier
23 this year in Macon.

24 Q. And do you recall that -- do you recall
25 updating the PowerPoint presentation prior to that

1 training session?

2 A. I know that the PowerPoint presentation was
3 updated in 2018. Mainly because we had transitioned
4 from a Kennesaw State to an SOS environment, so we
5 had to change the background. But we also at that
6 time found some opportunities to update some of the
7 content as well.

8 What -- what all did I update at that point
9 in time? I don't recall that, but ...

10 Q. Does the Secretary of State's office
11 maintain current and previous versions of these
12 PowerPoint presentation?

13 A. I -- I don't know how far back those
14 records go.

15 Q. Do you know where they would be located
16 within the Secretary of State's office?

17 A. There is a -- there's a training
18 coordinator within the Secretary of State's office.
19 I would assume that she has those.

20 Q. Who is the training coordinator?

21 A. Melanie Frechette. And don't ask me to
22 spell her last name. I can't do it.

23 Q. And the same question with respect to any
24 presentation that are given at these state-wide
25 conference, are those -- are there written records of

1 those?

2 A. Those are -- there are written records.
3 Those are supplied to the members of the organization
4 by the organization itself. So Georgia Election
5 Officials. So I don't know how long they keep those
6 records. They are not a state entity. They are
7 just -- they are an organization.

8 Q. To the extent that the Secretary of State
9 or others from the Secretary of State's office
10 participate in that conference, are those records
11 maintained at the Secretary of State's office?

12 A. I would assume so, yes.

13 Q. Are there -- other than the trainings that
14 may occur at the state-wide conference and the
15 trainings we discussed that happened in Macon, are
16 there any other processes that the Secretary of
17 State's office engages in to train election officials
18 related to the use of DREs during elections?

19 A. The Secretary of State's office has a -- a
20 process of communicating with the counties. I think
21 they call it 3T -- and this is again a different
22 section of the office than my section -- where they
23 have, they do sort of like a video chat with counties
24 and address certain topics that may be present at the
25 time.

1 So I would -- I would deem that as another
2 opportunity of the elections staff reaching out to
3 the counties and making sure that they are aware of
4 circumstances or items that need to be focused on.

5 Q. Are those --

6 A. And that's monthly, I believe.

7 Q. You always anticipate my questions.

8 Excellent.

9 Are there any other training opportunities
10 that the Secretary of State's office is responsible
11 for related to training election officials on DREs?

12 A. There may be others, but I think we have
13 covered them.

14 Q. I'll ask this question at a high level just
15 in case you can give me a high level answer, and then
16 we will drill down if you know more.

17 For all of these processes that we have
18 discussed, creating the ballots, distributing them
19 through training, do you know of any cost estimates
20 of how much it costs Secretary of State's office to
21 engage in these processes?

22 A. I do not.

23 Q. Do you know if the Secretary of State's
24 office has performed any cost analysis?

25 A. I do not.

1 Q. Who would you ask?

2 A. Again, I would probably start by asking the
3 elections director, Mr. Harvey.

4 Q. Okay. Soup to nuts. We are having so much
5 fun.

6 Can you describe all of the processes for
7 updating voter registration lists?

8 A. That, I cannot speak to. I am not a user
9 of the voter registration system in relation to
10 registering voters and updating voter registration
11 reports in the State's voter registration system.
12 That's not an action I perform in my section of the
13 office.

14 Q. Are there any components of the computer
15 network that are related to administering elections
16 that are connected to the Internet?

17 A. Not that I'm aware of.

18 Q. That are connected to phone lines?

19 A. Not that I'm aware of.

20 Q. Soup to nuts. Can you describe all
21 processes in place for preparing paper ballots?

22 A. Again, my -- my basis of knowledge is all
23 within the current system of voting in Georgia. So
24 to speak to the preparation of something outside of
25 that system, I can't really speak to.

1 Q. Well, the State of Georgia does -- paper
2 ballots are in use in the State of Georgia, correct?

3 A. Paper ballots, the optical scan ballots are
4 in use within the State of Georgia, but there are
5 other ways you can produce paper ballots. I can
6 speak to, you know, it's the same steps to build an
7 optical scan ballot as it is a DRE ballot. It's the
8 same process using our current system.

9 Everything that I have already spoken
10 about, it's the same. It's entering in the same
11 information in the same way, producing the same type
12 of output file. But when you say -- there's a
13 difference in code between a optical scan ballot and
14 a paper ballot and how it may be formulated out. So
15 that's why I -- I'm creating the difference between
16 those two.

17 Q. Okay. I see, okay.

18 So when I say "paper ballots," I meant
19 optical scan ballots.

20 A. All right.

21 Q. But I can use your terminology to make sure
22 we are on the same page.

23 So once -- when optical scan ballots are in
24 use, they are in use currently in Georgia in two
25 ways, correct?

1 A. They are used for -- they are used for
2 mail-out absentee and they are used for provisional
3 balloting.

4 Q. And so in the mail-out absentee ballot
5 process, what is the process for receiving and
6 securing those mailed-in ballots?

7 A. Again, that's -- that's something that the
8 county handles. I can't speak to how the county
9 manages the -- the collection of the ballot, how they
10 maintain the security on the ballot. That's not
11 something that I execute on a daily basis. That's a
12 county operation.

13 Q. And do you have any information on how the
14 county secures the in-person provisional ballots that
15 are optical scan ballots?

16 A. My recollection of that is that if a
17 provisional ballot is collected at the polling
18 location on election day, it's placed into an
19 envelope and that envelope is placed into a sealed
20 ballot bag. And that sealed ballot bag is brought
21 back with the polling precinct's supplies at the end
22 of the election day and that bag is maintained--

23 Q. Do you need some water?

24 A. No, I'm good. I've got some water.

25 Q. Okay.

1 The sealed ballot bag, is that something
2 that the county obtains themselves or is that
3 something provided by the State?

4 A. I believe that the sealed ballot bags that
5 the counties are currently using were provided by the
6 State back in the day. I don't know if counties have
7 procured additional bags since that time frame.

8 Q. Do you recall how long ago those bags were
9 procured?

10 A. 2002.

11 Q. Are the counties responsible for
12 distributing the paper ballots that are requested by
13 mail?

14 A. Yes.

15 Q. Are the paper ballots, the optical scan
16 ballots, whether they be the provisional ballots or
17 mail-in absentee ballots, are they -- are any
18 post-election audits conducted on those ballots?

19 A. To my knowledge, I do not believe so.

20 Q. Are any post-election audits conducted on
21 the DRE machines?

22 A. I do not believe there's any statute
23 currently in place for that. I believe there's a new
24 statute that's just been passed moving forward, but,
25 currently, no.

1 Q. Does your office conduct or create any
2 trainings related to administering elections on the
3 optical scan ballots?

4 A. Only in connection with the whole system.
5 We have never conducted a training class on using
6 optical scan ballots or election day use, setting up
7 a scanner in the polling location and managing
8 optical scan ballot handout. We have never done
9 anything of that nature.

10 Q. Is training on the optical scan ballot
11 process part of the existing training on the rest of
12 the system that your office conducts?

13 A. Right. We train them on how to use that
14 optical scanner as that central scanner, like I
15 referenced earlier. But we have never trained them
16 on how to set the scanner up as a polling place
17 scanner. That is -- that's a different
18 configuration.

19 Q. Are you aware of any cost estimates of what
20 it costs to administer election using the optical
21 scan ballots?

22 A. I do not.

23 Q. Has your office studied what it would take
24 to administer an election solely using optical scan
25 ballots?

1 A. I do not know.

2 Q. If the court ordered an all-paper, an all
3 optical scan ballot election, who would be
4 responsible for implementation of that directive
5 within the Secretary of State's office?

6 A. I would assume that my group would be
7 involved in developing the databases, structuring the
8 databases so that they could facilitate such a need.

9 But who would be in charge of the training,
10 development, the training schedules, whatever
11 materials would have to be produced to help
12 facilitate counties' use of such system, that -- that
13 would be in other people's hands and I do not know
14 who.

15 Q. You said that you assume your group would
16 be involved in developing the databases to facilitate
17 an optical scan election. What would need to --
18 would the databases need to change at all in order to
19 have an optical scan election?

20 A. Yes, we would have to adjust the databases
21 in some way. Right now as we build a database, we
22 configure a polling location for election day to be
23 touch screen use. We would have to configuration it
24 to be optical scan use.

25 It's just a matter of the databases would

1 have to be slightly adjusted, but they would have all
2 have to be adjusted. It would not be something at
3 the county level. It would have to be done at the
4 State level.

5 Q. Do you have any estimate as to how much
6 time that would cost?

7 A. I don't because, again, I would have to
8 look at the database to see how they are organizing
9 their election day polling locations. Is it, you
10 know, one-to-one, multiple to one. So I don't have a
11 true estimate of how long it would take.

12 Q. How does the way that they organize their
13 election day polling locations impact the way that
14 the database is structured?

15 A. Again, we talked about earlier especially
16 in the absentee, is when you have to count votes at
17 the precinct level. So whether it was an absentee
18 ballot, whether it's an election day ballot, whether
19 it's a provisional ballot, whether it's a mail-in
20 ballot, they all have to be processed back to the
21 county to the precinct level.

22 So the polling -- so the scanner that would
23 be used in a polling location has to have the
24 precincts associated to it. In most circumstances,
25 that's a one-to-one relationship. One polling

1 location, one precinct. But that's not the case in
2 every location.

3 There are a number of counties that have
4 multiple reporting precincts assigned to a single
5 polling location. So just making sure that the
6 database is properly configured so that the scanner
7 can receive ballots from those multiple precincts and
8 understand where the result of that vote should be
9 routed to for reporting purposes.

10 Q. When -- do you have an understanding of how
11 the precinct-by-precinct processing works for optical
12 scan ballots that are mailed in?

13 A. Yes, as we talked to previously, for
14 example, again, in Fulton County, so each scanner
15 that Fulton County has set up only holds a certain
16 number of precincts. It can't go over 22 because of
17 capacity.

18 So when the ballot comes in, they have got
19 to organize the ballot. They have got to sort the
20 ballots by precinct. So they collect the ballot and
21 they see, okay, that's Precinct 1A. It's going to go
22 in the Precinct 1A stack once it's there. This one
23 is this, it goes in that stack. And now what scanner
24 processes 1A, what scanner processes 1B, what scanner
25 processes 213G. and then you have to make sure that

1 that ballot goes through that scanner.

2 The content of the ballot may look the same
3 to the human. It's the same list of races. But the
4 result of the ballot has to be reported back to the
5 specific precinct to which the voter is connected to
6 and it does that through the scanning of the optical
7 scanner.

8 Q. Got it.

9 MS. BENTROTT: Okay. Ready for another
10 break?

11 THE WITNESS: Yes.

12 THE VIDEOGRAPHER: The time is 5:28 p.m.
13 We are now off the record.

14 (WHEREUPON, a recess was taken.)

15 THE VIDEOGRAPHER: The time is 5:39 p.m.,
16 and we are back on the record.

17 Q (By Mr. Brown) Okay. So you may recall
18 back at the preliminary injunction hearing in this
19 case in September you testified that CES built a
20 brand-new air gap system after transitioning back to
21 the Secretary of State's office?

22 A. Uh-huh.

23 Q. Is that true?

24 A. That is correct.

25 Q. What can you tell me that's new and

1 different about that system from the system that you
2 had at KSU?

3 A. Again, I'm going to reference you back to
4 SOS IT to speak to you about what their system is
5 currently comprised of. So, you know, what is the
6 difference between X and Y, I don't know what all
7 they have and why in relation to, you know, what may
8 be different.

9 The system at Kennesaw was a isolated
10 computer. And it was plugged into a network that was
11 separate and apart from the public network. Which
12 was validated by the KSU IT instance multiple times.
13 And even after the March 1st, March 1st incident to
14 validate again that the private network that was in
15 existence at KSU was still private, that there was no
16 point of entry.

17 Q. Just to clarify, the private network that
18 you are describing that was at KSU, are you talking
19 about the ballot-building server?

20 A. Yes.

21 Q. And the three ballot-building computers
22 that were linked to it.

23 A. Right, yes.

24 Q. But to be clear, that wasn't the entire
25 scope of the system at KSU, correct?

1 A. The -- when you say "scope of the system at
2 KSU," explain.

3 Q. Well, I think you described three servers
4 that you had at KSU, right, the ballot-building
5 server, the --

6 A. The ballot-building server and the Epic
7 server both resided on the private network. Which,
8 again, KSU IT looked at post-incident and confirmed
9 that everything was still contained within a private
10 environment. No outside -- no outside web access
11 points in that system.

12 The third server was the web server and it
13 was plugged into the external public network
14 environment.

15 Q. And I think we touched on this earlier, but
16 all of the information that was found by Grayson and
17 Lamb on -- that you say came from the public server,
18 was all of that information that you would have
19 expected to be on the public server?

20 A. It was information that I knew would have
21 been on the public server at some point in time. It
22 is not information that I expected to be there at the
23 time. But it was information that had been at some
24 point in time on the web server because it was used
25 for that -- the things that were there were again

1 files that were being distributed to the county for
2 operations at the county level.

3 Q. And so since CES moved to the Secretary of
4 State's office, CES still has the Epic server and the
5 ballot-building server, correct?

6 A. We have a new ballot-building hardware
7 that -- that holds the files that are used by our
8 ballot-building team. And we have a new box that is
9 holding the Epic software and the data files that are
10 needed to make Express Poll data sets.

11 Q. And you said before that they are running
12 the same, if not the same exact software, but the
13 same version, the same type of software that they
14 were running --

15 A. The same version of software. Everything
16 may be on different operating systems, but it's the
17 same version of executable.

18 Q. And at KSU, there were three additional
19 computers that were connected to the ballot-building
20 server, correct?

21 A. For each employee at the Center for
22 Election Systems had a private network terminal and
23 they had a public terminal. So if you were a ballot
24 builder, you had two computers at your desk. You had
25 a ballot-building computer that was connected to the

1 private. You had a public-facing computer that you
2 were able to communicate with the counties back and
3 forth with.

4 So all full-time employees had the two
5 computers; one to the private and one to the public.

6 Q. And do all full-time employees still have
7 that same setup of two computers --

8 A. Yes.

9 Q. -- one private and one public?

10 A. Yes, yes.

11 Q. And they run the same software that was
12 being run at KSU?

13 A. The same version of GEMS, the same version
14 of Epic.

15 Q. And the processes of building the CD, are
16 those the same as the processes when you were at KSU?

17 A. I believe we are using the same, the same
18 CD burning software that was used at Kennesaw, yes.

19 Q. And the processes of putting information on
20 your USB hard drive, is that process the same as when
21 you were at KSU?

22 A. It's slightly different because of the
23 encryption that is maintained on the SOS public side.
24 So if there are data files that we are having to pull
25 down from the public, like if we are pulling the text

1 files that we need from the voter registration
2 system, that is on -- the file is encrypted when it
3 leaves the public box and then has to be transported
4 via the encrypted USB drive and then password-enabled
5 in order to move the data file onto the private
6 network side.

7 Q. And how does that differ from the process
8 when you were at KSU?

9 A. The file that was coming from the State
10 didn't have that encryption element on there.

11 Q. And do you have any more detailed knowledge
12 on what that encryption is?

13 A. That's an SOS IT question.

14 Q. Can you identify any specific differences
15 other than the ones we have discussed in how the
16 current system differs from the system that was in
17 place at KSU?

18 A. I would have to, again, lead you to the SOS
19 IT to speak about the current system. And I don't
20 have an operational knowledge of all of the -- the IT
21 surroundings over the previous system.

22 Q. But as far as --

23 A. I just used it. I didn't configure it.

24 Q. Sure. But as far as your interaction with
25 the system goes, can you identify any other

1 differences?

2 A. In response to your question, I can't. I
3 can't think of anything that would -- that would
4 answer -- give you anything other than "I don't
5 know."

6 Q. Does the private network that you referred
7 to, does that -- did that include the web server?

8 A. No, the web server was never connected to
9 the private -- to the private level. The web server
10 was on the web. It was on a public, public domain.
11 It was in a public network slot. It was not
12 connected to the private system.

13 Q. Was there ever any occasion to transfer
14 information from the private network to the web
15 server?

16 A. When we would be uploading pdf files to the
17 county, when we would be uploading those reports to
18 the county for them to view, then there would be data
19 moved from the private to the public using one of
20 those lockable USB drives.

21 Q. Is there -- was there ever any occasion to
22 then -- was that USB drive reused in going back and
23 forth from the private network to the public network?

24 A. It was, and it would be reformatted before
25 data was moved to and from it.

1 Q. Every time?

2 A. Uh-huh.

3 Q. Was there ever any occasion to transfer any
4 files that were not pdf files from the private
5 network to the public network?

6 A. I believe I said earlier today that in
7 those emergency circumstances where we had to
8 transfer an electronic copy of the GEMS database to a
9 county in emergency circumstances, that that GEMS
10 file would be moved from the private storage location
11 over to the public web server for county to access.

12 Q. What about a training database?

13 A. Yes, training database would have been
14 placed on the web server for a county to obtain.

15 Q. Where would the training database come from
16 in the first instance?

17 A. The training database would have come from
18 the CPU, not the ballot-building server. It wouldn't
19 have been housed on the ballot-building server. It
20 would have just been housed on an individual PC that
21 was connected to the private network, but the file
22 itself was residing on that individual PC.

23 Q. And how would a training database get from
24 the PCU to the public-facing server?

25 A. Again, through a lockable USB.

1 Q. And how would a -- how -- how would the
2 training databases differ from the actual databases,
3 if at all?

4 A. I'm trying to remember how the training
5 database was constructed and what time it was last
6 constructed. There would not be tremendous
7 difference between the training database and a --
8 just in scope, it would be a much smaller database.
9 But organization of data would be similar.

10 Q. Can you name any other actions that the
11 Secretary of State's office has taken to secure the
12 system since transferring it in-house from KSU?

13 A. Other than what we have already said today?
14 I can't speak to any other items.

15 Q. Can you name any actions the Secretary of
16 State's office has conducted to decontaminate the
17 system since transferring it from KSU?

18 A. What do you mean by "decontaminate?"

19 Q. To the extent it is -- the system is
20 infected or infiltrated in any way, to remove those
21 infections or infiltrations?

22 MR. TYSON: I'll object. That calls for
23 speculation, but you can answer.

24 A. Again, we have brand-new hardware that
25 wasn't transitioned from KSU. It was procured by

1 SOS. The software that was used at KSU was installed
2 on the new locations in SOS with the install CDs that
3 were originally used to install the software on the
4 servers at KSU. So it wasn't a transfer of the file
5 from the server directly to it, it was through a CD
6 that existed previously.

7 Q. So to get --

8 A. That's my recollection of how they loaded
9 the information onto the new systems.

10 Q. So just to make sure I understand, to get
11 the data that was housed on the system at KSU
12 installed on the system at the Secretary of State's
13 office, that data was loaded on to CDs?

14 A. No, that data was on CDs external to the
15 servers. We have copies of install CDs that had been
16 retained and kept so that you had the ability to be
17 able to install into a new box if you needed to. You
18 didn't transfer from device to device. You would
19 just do a new install on the new device.

20 Q. And what -- what specifically are we
21 talking about was being installed?

22 A. The GEMS executable, the GEMS program.

23 Q. Were the databases transferred when -- when
24 CES moved from KSU to the Secretary of State's
25 office?

1 A. I believe all the databases that were in
2 possession of KSU were transferred to Secretary of
3 State's office.

4 Q. Do you know how they were transferred?

5 A. I believe they were transferred via
6 encrypted USB memory hard drives that SOS had
7 provided.

8 Q. Do you know who was --

9 A. And then SOS did the extraction and saved
10 to that.

11 Q. Do you know who at SOS did that extraction?

12 A. I believe it was Tom McClouth.

13 Q. Was anyone else involved in that process?

14 A. I don't recall.

15 Q. And do you -- you may have answered this
16 before. I'm so sorry if I'm repeating myself. But
17 do you know the operating system that's currently in
18 use at the Secretary of State's office?

19 A. I do not know the specific operating
20 version.

21 Q. Do you know the general operating system?

22 THE WITNESS: It's a Windows operating
23 system. What version, I do not know.

24 Q (By Ms. Bentrott) Do you recall if it's the
25 same version of Windows that was in use at KSU?

1 A. On the server as an operating system, I
2 don't recall.

3 Q. Are you aware of any investigation that the
4 Secretary of State's office has conducted to
5 determine the impact of the vulnerabilities that were
6 identified when the system was at KSU?

7 A. I do not.

8 Q. The software used on the DREs is called
9 Ballot Station, correct?

10 A. Correct.

11 Q. What does that software specifically do?

12 A. My understanding of what Ballot Station
13 does is that it takes the information that the GEMS
14 computer has generated through its ballot structure
15 and then reads that data and displays that data for
16 use on a touch screen.

17 And then it goes through a process of
18 collecting interactions that voters have with the
19 touch screen device and collects the voters' intent
20 when casting the ballot. And then produces the
21 printed reports that come off of a touch screen
22 during pre-election and post-election use. It's --
23 it's the program that reads the data file that's
24 created through GEMS.

25 Q. Do you know what version is currently

1 installed?

2 A. 4.5.2.

3 Q. Do you know when that -- if that's the most
4 recent version?

5 A. That is the most recent version and it was
6 installed in 2001 -- or 2011, excuse me.

7 Q. So the last time it was updated was in
8 2011?

9 A. It was, yes.

10 Q. Have there been security patches or updates
11 since then?

12 A. We have not installed any other version of
13 Ballot Station since 2011.

14 MR. BROWN: Have there been any security
15 patches to that version since that time?

16 THE WITNESS: I don't know if any security
17 patches have been made to that version.

18 Q (By Ms. Bentrutt) When the update was made
19 in 2011, do you know how the updates were protected
20 against tampering before they were installed?

21 A. The updates were acquired from the Federal
22 Testing Lab and then that install disk was provided
23 by the testing lab and then that -- the components
24 that were on the -- the install disk were then
25 transferred to memory cards that were maintained by

1 the Center for Election Systems. And then those
2 memory cards were used for loading the install into
3 the touch screens.

4 Q. Do you know the process by which the
5 updates were installed to the machines?

6 A. To the DREs?

7 Q. Yes.

8 A. It was through a memory card. So the
9 memory card was -- touch screen was -- was opened at
10 the county level by a testing team. The memory card
11 with the update would be placed into one of the
12 memory card slots on the DRE and then the DRE was
13 then turned on.

14 And then it was a process where the system
15 read what was on the memory card and updated the
16 specific information that needed to be updated. Once
17 that process was concluded, that memory card was then
18 removed and then the machine went through a full
19 acceptance test where an elections database was
20 loaded to the device and then an acceptance test
21 performed on the device to make sure that the proper
22 version had been installed and that it was still --
23 and that it was operating as expected.

24 Q. Does Georgia have the source code?

25 A. I do not know.

1 Q. Has the -- I assume you don't know this,
2 but has Georgia ever modified the source code?

3 A. I do not know.

4 Q. Is Georgia aware of vulnerabilities that
5 other states have found in their DRE systems, are you
6 aware?

7 A. I'm aware that other jurisdiction have
8 decided to move away from DREs. For what reason, I
9 do not know.

10 Q. So you are not aware, for example, that
11 California found vulnerabilities in their own DRE
12 system and that that -- well, stop there.

13 A. I know that -- I know that State of
14 California did a recertification examination, that's
15 the way I would classify it, of their DRE systems I
16 believe in 2006 or '7, somewhere in that frame. And
17 they concluded upon that that they felt that DREs
18 were no longer something that they could certify for
19 use in that state.

20 Q. Based on vulnerabilities they found?

21 A. I believe --

22 Q. Is that not your understanding?

23 A. You know, what, what determination they
24 made, I did not read the full record to see what all
25 determinations they made. I see -- I know that they

1 made a determination that they did not want to
2 certify DREs for use anymore in that state.

3 Q. When you were employed at the Secretary of
4 State's office at the time that Georgia was
5 considering switching to DREs, did you go on a --
6 let's, you can rename it, but on sort of a
7 fact-finding mission to California to learn about
8 their use of DREs?

9 A. During -- during the, I believe 2001, I
10 accompanied a member of the 21st Century Voting
11 Commission, Representative Buddy DeLoach to Oakland,
12 California to witness an election being run on DREs
13 at the time in the City of Oakland.

14 Q. And this was before Georgia had adopted
15 DREs?

16 A. Yes, that is correct.

17 Q. And what was the purpose of the trip?

18 A. Just to learn more about DREs and their
19 use, to see them in an actual elections operation, to
20 get some feedback from poll workers and from voters,
21 you know, on what they felt of the machine. And also
22 to speak with the county elections director at the
23 time. I don't remember his name. And just get a
24 sense of what they thought of this type technology.

25 It was newer technology to the State of

1 Georgia at the time and so it was an opportunity to
2 see it in use.

3 Q. Was it -- was it beneficial to see that new
4 technology was being used by another state and
5 understand how it worked before Georgia implemented
6 it?

7 A. Yes.

8 Q. And California's experience was relevant to
9 Georgia's decision-making in this time frame,
10 correct?

11 A. In 2001?

12 Q. Yes.

13 A. I think the fact that it was in California
14 was just the fact that it was in California. Because
15 we had we visited locations in South Carolina,
16 locations in Ohio, and locations in California to
17 learn more about DRE use in elections. So we did
18 visit California, but we visited other places to
19 learn more about DRE use.

20 Q. That's because the experience with other
21 states with DREs was relevant to Georgia's
22 decision-making process and --

23 A. We wanted to learn more about the use of
24 DREs because we had never used DREs in the State of
25 Georgia prior to that pilot project in 2001.

1 Q. Why is it that California experience in
2 using DREs was relevant and useful information in
3 2001, but their top-to-bottom review of DREs that
4 occurred in 2006, 2007 determining that there were
5 vulnerabilities in the DRE system was not relevant to
6 Georgia's decision-making process?

7 A. That's a question for those that were in a
8 position to make the poll decisions in 2006 and 2007.
9 I worked for the Center for Election Systems at
10 Kennesaw State. Was not a member of the Secretary of
11 State's office at that time. We did, you know, meet
12 with the Secretary of State's office, you know, in
13 our capacity as being under contract with the
14 Secretary of State's office, but it came down to the
15 policy-makers on the decisions that were made.

16 Q. Has the State of Georgia made any changes
17 in response to vulnerabilities that have been
18 reported in other state's DRE systems?

19 A. Not to my knowledge.

20 Q. Do all Georgia voting machines use the same
21 encryption keys?

22 A. Each device in the county are -- in the
23 counties are running the same encryption key, yes.

24 Q. Do all supervisor cards have the same code
25 or pin?

1 A. No, no.

2 Q. Same question with respect to the
3 administrator cards.

4 A. We don't use an administrator card in
5 Georgia.

6 Q. And for the supervisor cards, is the
7 encryption process the same for all of them?

8 A. Yes.

9 Q. Did you have any involvement in the
10 decision to degauss the server at KSU?

11 A. I did not have any control of the server at
12 that point in time. It was in the possession of KSU
13 IT and they were in control of that KSU asset-tagged
14 device. And they were in control of the next steps
15 in how they held that or how they repositioned that
16 for use within the University if they so choose.

17 Q. Were you involved in the decision-making
18 process at all?

19 A. I was aware that they had the computer and
20 that they were, you know, wanting to re-task the
21 computer, but other than that, no.

22 Q. You were not aware that they were planning
23 to degauss the computer?

24 A. I did not know what steps they were going
25 to do to try to reuse that computer.

1 Q. And you were not aware that they were
2 planning to DBAN the computer?

3 A. I don't know what DBAN means.

4 Q. So you were not aware?

5 A. Like I said, I don't know what that means.

6 Q. And you weren't involved in the
7 decision-making process with respect to wiping the
8 server?

9 A. No.

10 Q. Were you aware that re-purposing the server
11 would involve wiping the server?

12 A. I -- I did not know that re-purposing the
13 server would have meant completely re-formatting the
14 server so that any existing data on there would no
15 longer be available.

16 Q. And I recall you asked -- we discussed this
17 earlier, we can turn back to Exhibit 21 if it's
18 helpful to you. But you reached out to KSU IT when
19 you felt like you didn't have the data you needed to
20 conduct your operations.

21 A. Uh-huh.

22 Q. Is that correct?

23 A. Uh-huh.

24 Q. And did they end up providing you with the
25 data you needed to conduct your operations?

1 A. Yes, they did.

2 Q. And what did that entail? Was that a
3 subset of the data that was on the server?

4 A. No, that was some instruction manuals that
5 were there, like the instructions manuals we talked
6 about that were available on the web server for
7 counties. That's where the most recent version of
8 the data was and that's what I was needing were those
9 training files so that we would have them in hard
10 copy so that we could reproduce and get out to
11 counties.

12 We didn't have a web server anymore with
13 that information, so we needed all that stuff that
14 had been out there for county training purposes, have
15 it back in our possession so that we could make it
16 available to counties again.

17 Q. And is that the only data that you
18 retrieved back from KSU IT once they had taken the
19 server?

20 A. I think the other thing that was on there
21 was some inventory records on one of the partitioned
22 drives of the web server was the inventory or testing
23 records that showed that this machine was in this
24 county and it had been tested X number of times.

25 Q. So inventory records of testing at county,

1 at the county level was on the web-facing server?

2 A. It was on a partitioned drive of that -- of
3 that device. This is answering the question to the
4 best of my ability. I don't know if that partition
5 was web-facing or not. But I know that that
6 partition was on that particular computer.

7 Q. And forgive me, what do you -- what do you
8 mean when you say "a partitioned drive?"

9 A. That is the language that was always
10 referred to me by my IT staff. So I can't give you a
11 definition of partition. That is just how they, you
12 know, spoke of it to me and they always used that
13 terminology saying that this may be on the box, but
14 it's not public facing. It's -- it's on this box,
15 but it's not accessible to the public.

16 Q. What information is housed in or was housed
17 in those inventory records?

18 A. It is just, you know, what machine is in
19 what county. It is just like, you know, Machine X is
20 in this county and was purchased at this time. It's
21 a state purchase or it was a county purchase. And if
22 we had -- every time that we touched it, every time
23 that we had inspected the unit, there was a date
24 stamp of when we last tested it, who was the one that
25 tested it, did it pass, did it fail. If it failed,

1 why did it fail.

2 Q. Why would that information have been on the
3 public -- on the -- on the web server?

4 A. That is a good question and I don't know
5 the answer to that.

6 Q. Is there any other information that you can
7 recall now that would have been housed on the web
8 server when it existed that we haven't already
9 covered?

10 A. No, ma'am.

11 Q. Is there any additional information that
12 KSU IT sent you after besides these two things we
13 discussed, the training manuals and the inventory
14 records?

15 A. Not, not in my recollection, no, ma'am.

16 Q. When machines are purchased, they are
17 purchased at the county level or at the state level?

18 A. They are now purchased at the county level.

19 Q. Were they purchased, ever previously
20 purchased at the state level?

21 A. The State has made two purchases of voting
22 equipment. They made a purchase in 2002. They made
23 a subsequent purchase in 2004. And I believe that
24 is -- that is the total of state GRE procurements.
25 All other procurement have been done at the local

1 level.

2 Q. Do you recall if counties have made
3 procurements of DRE machines recently?

4 A. I believe that they have procured some DRE
5 machines in leading up to the 2018 elections. But
6 the last unit purchased, I could not remember.

7 Q. Do you have any estimate about as to what a
8 DRE machine costs?

9 A. I think the current price is \$2,500 or
10 something like that per device.

11 Q. And is that an all-in price that includes
12 sort of all the other hardware and software that's
13 required to administer?

14 A. Yes. Yes. From the vendor, yes. I don't
15 even know honestly if the vendor right now has any
16 equipment to sell.

17 MS. BENTROTT: Why don't we take a quick
18 break.

19 THE WITNESS: Okay.

20 THE VIDEOGRAPHER: The time is 6:10 p.m.
21 We are now off the record.

22 (WHEREUPON, a recess was taken.)

23 THE VIDEOGRAPHER: The time is 6:19 p.m.,
24 and we are back on the record.

25 ///

1 EXAMINATION

2 BY MR. BROWN:

3 Q. This is Bruce brown for the coalition
4 plaintiffs with just two more questions.

5 Is the encryption key still F2654HD4?

6 A. Honestly, I do not know the specific
7 encryption key, what -- what the -- what the code is.

8 Q. But it's hardwired into the system. It
9 hadn't been changed; is that right?

10 A. Again, I don't know what the current
11 encryption key is. I know it's the same, that all
12 the devices have the same, but I don't know what that
13 code is.

14 Q. All the devices have, have the same and
15 it's been the same since the equipment was acquired,
16 correct?

17 A. I honestly cannot remember when we
18 transitioned in one of our versions if we updated the
19 key in that transition or not.

20 Q. You testified that there is a limit to the
21 optic scans of 22 precincts; is that right?

22 A. That's correct.

23 Q. And what is the basis for that?

24 A. Experience in building the databases
25 through the years. When -- before the State went to

1 a reporting of the precinct results at the -- you
2 know, reporting precinct level results absentee.
3 Prior to that, the State had a precinct called the
4 absentee precinct. And that was an all-inclusive
5 precincts. It was what was called as a cumulative
6 precinct. So it was a single precinct that had all
7 of the base or the district combo values in that one
8 precinct.

9 And it created -- you could put all of the
10 county in that one precinct and it didn't matter the
11 size. Because it wasn't a precinct-by-precinct
12 report. It's that if you cast a vote in the
13 absentee, it's part of the absentee precinct. It
14 wasn't portioned out by precinct.

15 When the State came back and said, no, we
16 need to know absentee level results in the precinct
17 level, we had to rebuild the databases to meet that
18 configuration. We started out with just building
19 a -- a single precinct and putting -- or a single
20 vote center, absentee vote center, and putting all of
21 the individual reporting precinct into that vote
22 center.

23 When we started that process, we found that
24 it -- when you try to create a memory card at that
25 point, it couldn't hold it.

1 Q. A memory card for the optic --

2 A. For the optic scan. It could not hold all
3 that data, so we had to start basically working back
4 from the maximum down to where it would work and
5 continually work and we found that that area was
6 around 22 reporting precincts.

7 I think now we tell counties that let's
8 keep it at 20 so that we aren't up against any type
9 of memory problem, that with 20 we will be in good
10 shape.

11 Q. On -- I have sort of a staffing management
12 question. Are you involved in the planning for the
13 implementation for the new system if the State does,
14 in fact, purchase one?

15 A. Repeat the question again.

16 Q. Are you involved in the planning for the
17 implementation of the new system if the State ended
18 up purchasing one?

19 A. I don't know how far to get into talking
20 about a current procurement process, but the process
21 of planning, sort of like coming up with ideas of
22 time lines, yes, I have been involved in some of
23 those discussions.

24 Q. Is the State going to hire a separate
25 person to be like an implementation manager for

1 that --

2 MR. TYSON: I'm going to object since as an
3 active RFP, there is a lot of confidentiality
4 rules that are surrounding that RFP process, so
5 I don't want to get into something where Michael
6 is going to need to disclose something that is
7 part of that, so I just want to make sure we're
8 good on that.

9 MR. BROWN: That's fine.

10 Q. (By Mr. Brown) Who would know the answer
11 about the encryption key?

12 A. I don't know.

13 Q. Somebody in IT?

14 A. I don't know. Because this gets back to
15 when we went through version change when that became
16 an option. And I honestly do not recall if we
17 altered that encryption key when we did that install.
18 I just don't recall.

19 MR. BROWN: All right. That's all I have
20 right now. Thank you.

21 And what is the total time for the record?

22 THE VIDEOGRAPHER: Six hours and 13
23 minutes.

24 MR. BROWN: Okay. For the record, we have
25 used up six hours and 13 minutes.

1 MS. BURWELL: Bryan, do you intend on
2 asking any questions?

3 MR. TYSON: Just a couple of brief
4 questions. Does anyone have anything else?

5 EXAMINATION

6 BY MR. TYSON:

7 Q. Mr. Barnes, I just want to ask you a couple
8 of questions.

9 Mr. Brown asked you earlier about the
10 challenged vote for absentee panel within the DREs.
11 Do you recall those questions?

12 A. I do.

13 Q. And has that been used -- is that being
14 used in Georgia today?

15 A. It is not.

16 Q. And has the challenged vote panel been used
17 since -- at any point since 2007 when the law was
18 changed?

19 A. No, sir.

20 Q. There was some discussion about the
21 supervisor card that's used in each precinct. Does
22 the poll manager have to take any other action beyond
23 just inserting the supervisor card to end the
24 election on the DRE?

25 A. They have to enter a passcode.

1 Q. And how do they obtain that passcode?

2 A. That is obtained from the elections office.
3 They provide that information to the individual poll
4 manager.

5 Q. There was some questions about the My Voter
6 page and the on-line voter registration system. Do
7 you recall those questions?

8 A. I do.

9 Q. Is MVP different than the state's voter
10 registration system?

11 A. It is a -- in my understanding, yes, it is.
12 It is a way for a voter to access information about
13 their polling location, their current registration
14 status and stuff of that nature, that it's not a
15 system where that record is then updated by the
16 voter.

17 Q. And is the on-line voter registration
18 different than the State's voter registration system?

19 A. Again, my understanding is yes, it's a way
20 for a voter to make a request to become registered to
21 submit information electronically to the county for
22 registration purposes.

23 Q. There was some questions regarding
24 municipal elections and the review your office
25 performs on vendor build GEMS databases. Do you

1 recall that?

2 A. I do.

3 Q. After your office reviews the municipal
4 election database built by the vendor, does the
5 Secretary of State take any other action related to
6 that GEMS database?

7 A. The other action is when the vendor --
8 vendor is needing to prepare the memory cards for the
9 jurisdiction. The vendor would come to the Secretary
10 of State's office and use a trusted GEMS computer
11 within the Secretary of State's office under
12 supervision of a Secretary of State employee to
13 create the media that would need to be delivered to
14 the jurisdiction.

15 Q. And then the Secretary of State's office
16 doesn't have any further responsibility after that
17 media is created?

18 A. They do not. They do not.

19 Q. If you saw a vote, an election result tape
20 from a DRE machine for the November 2018 election, it
21 had a date from 2003 on it, would that surprise you?

22 A. It wouldn't necessarily surprise me. Just
23 because part of the logic and accuracy process is to
24 set the proper date and time on the device during the
25 L&A process and sometimes county election officials

1 in doing their L&A don't set the clock properly.

2 MR. TYSON: All right. I don't have any
3 other questions.

4 MS. BENTROTT: Just a little bit of
5 follow-up on that.

6 EXAMINATION

7 BY MS. BENTROTT:

8 Q. You said that in addition to the supervisor
9 access card, they get a passcode from the election
10 office; is that correct?

11 A. That's correct.

12 Q. Is that the county election office that you
13 are referring to?

14 A. That is correct.

15 Q. And do you know how those passcodes are
16 generated?

17 A. Those passcodes, when we re-update the
18 supervisor card with passcodes, those passcodes would
19 have been randomly generated using an Excel
20 spreadsheet at the time.

21 And then an interesting thing that we found
22 through the years is that there are some of those
23 codes that the touch screen, for whatever reason,
24 would not recognize. So we would generate a list of
25 159 random numbers and then we would test each one of

1 those codes to make sure that it would be recognized
2 by the touch screen. If that code that had been
3 randomly generated would not be recognized, then a
4 new randomly number would be generated for the county
5 until -- and tried again until we found 159 usable ID
6 numbers that could be used.

7 Q. So the Secretary of State's office is the
8 entity that generates the passcodes; is that correct?

9 A. The last time the update was done was at
10 the Center for Election Systems, so KSU was
11 generating that set of those set of codes.

12 Q. And when was that done?

13 A. That was in 2017.

14 Q. And so the codes have been the same since
15 then?

16 A. That is correct.

17 Q. So CES at KSU would generate the passcodes
18 to test them out on a DRE machine to make sure the
19 DRE would accept them?

20 A. Uh-huh.

21 Q. And how would those passcodes then be
22 transmitted from CES to each county election office?

23 A. Those passcodes would be written down on a
24 transmittal form that went with the compact flash
25 cards when they were delivered to the county. So the

1 county would get those compact flash cards with
2 instructions to call back to the center to get the
3 passcode, and then they would fill in the passcode
4 once we verified we were talking to the proper
5 county.

6 Q. And that same process has been used for
7 each election since those passcodes were generated at
8 CES in 2017?

9 A. Once the county has the code, they have the
10 code, it's in their possession at that point in time.
11 If they, you know, lose where they have that code, we
12 have the code that we can provide back to them, but
13 only after verification of who we are speaking with.

14 Q. Where does CES maintain those codes?

15 A. They are maintained on the private -- on
16 the -- in the private network in a spreadsheet that's
17 maintained on the private network.

18 Q. If you know, how does each county election
19 office inform each supervisor what the passcode is?

20 A. I do not know.

21 Q. You also mentioned something about county
22 officials might not set the clock properly --

23 A. Uh-huh.

24 Q. -- on a DRE during logic and accuracy
25 testing. What is the basis of that assertion?

1 A. When you are setting the clock, it requires
2 you touching the screen in specific locations where
3 you have to set the hour, the minute, the time -- I'm
4 trying to think of the word. The time zone that's
5 used. And if you don't hit the right thing in the
6 right way and go through the proper sequence, then it
7 can set the clock off by a couple of hours.

8 Q. Or a couple -- or a decade?

9 A. Again, it's about user input of selecting
10 the right thing. So I can't speak to how they ended
11 up putting the wrong date in, but I know it is a
12 possibility to do so.

13 Q. Is that the only possibility for -- for how
14 we could explain that the -- such a date discrepancy?

15 A. Knowing that during the logic and accuracy
16 phase that you are required to set the date and time,
17 then it leads to me to think that that is a -- that
18 is the most probable possibility of the clock being
19 set to the wrong date and time.

20 Q. What other information are county officials
21 expected to input into the DREs that -- that they
22 could do incorrectly?

23 A. The setting of the date and time is the one
24 thing in diagnostics where they set the date and
25 time. Once that diagnostic process is done, then

1 they are printing out reports and that's just a print
2 process.

3 They are also checking the voter access
4 card to validate that the voter access card, that the
5 card reader/writer that is on the touch screen can
6 recognize the card, that it can do its action. Those
7 are part of the diagnostics.

8 Also, calibration is something that's done
9 by the local election official. That they have to
10 touch specific points on the screen to properly
11 calibrate the machine. If they don't touch the
12 proper point right in the center of the crosshair,
13 but they continually press slightly above the
14 crosshair or slightly about below the crosshair but
15 do that consistently, that could create a slightly
16 mis-calibrated device as well. And that's something
17 that's done locally by the county election official.

18 Q. Can you think of anything else?

19 A. I cannot.

20 MS. BENTROTT: No further questions.

21 MR. TYSON: I don't have anything else.

22 THE VIDEOGRAPHER: The time is 6:32 p.m.

23 This concludes the deposition. We are now off
24 the record.

25 (WHEREUPON, the proceedings were concluded at 6:32 p.m.)

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I declare under penalty of perjury
under the laws that the foregoing is
true and correct.

Executed on _____, 20____,
at _____, _____.

MICHAEL BARNES

Sworn to and subscribed before me this ___ day of
_____, _____.

NOTARY PUBLIC

My Commission Expires: _____

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C E R T I F I C A T E

STATE OF GEORGIA)

) ss.:

FULTON COUNTY)

I, Robin Ferrill, Certified Court Reporter
within the State of Georgia, do hereby certify:

That MICHAEL BARNES, the witness whose
deposition is hereinbefore set forth, was duly sworn
by me and that such deposition is a true record of
the testimony given by such witness.

I further certify that I am not related to
any of the parties to this action by blood or
marriage; and that I am in no way interested in the
outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set
my hand this 10th day of July, 2019.



ROBIN K. FERRILL, RPR

[& - 22]

&	1303 85:3	1936 1:23	2016 5:15 9:9 17:9
& 2:21 3:22,25	131 53:7	194 5:19	24:21 28:2 33:7
0	1310 85:4	197 6:4	34:9,25 36:19
01j 204:15	13637 288:23	1:17 1:6	47:20 48:5,13
07h 105:18 139:23	14 46:3	1:55 104:12	54:18 57:4 61:19
1	141 3:13	1a 250:21,22,24	62:8 64:2 65:17
1 1:25 4:19 8:15	143 4:7	1b 250:24	112:25 114:25
8:16 37:24 43:24	14th 1:18	1st 75:1 78:12 80:3	116:11,15,24
44:11 69:12 70:2	15 51:1,6 53:6,9	108:23 252:13,13	149:17 155:19
1.18 4:21,24 88:20	62:12	2	172:3 174:3 235:8
91:1	1500 2:13	2,500 274:9	235:17,20
10 48:3,4 154:18	159 24:8,10 62:9	2.3 4:24 91:1	2017 8:21 9:2
206:3 219:13	118:25 133:14	20 4:12 37:22 38:1	44:12 65:5 69:12
10/11/17 4:18	282:25 283:5	38:7 128:3 277:8	82:12 83:5,14,16
43:23	15th 79:7 80:12	277:9 287:5	85:5,12 87:15
105 5:8	16 4:16 38:4,10	20005 2:15	160:22 283:13
10:09 1:15 7:5	118:14 119:3	2000s 96:4	284:8
10th 23:10 288:17	1600 3:4	2001 117:17,17	2018 5:18 8:15,16
11 44:12	162 69:11,12	263:6 266:9	84:23 105:1 132:9
110 107:16,20	164 67:21	267:11,25 268:3	174:5 193:19,24
1123 2:5	165 69:1	2002 10:4 191:12	240:3 274:5
113 107:20	167 67:2	209:2 246:10	281:20
11:49 72:1	169 66:11	273:22	2019 1:14 4:4,16
11:58 72:4	17 118:14 119:3	2003 99:25 100:1	7:3,5 38:4,10
11th 23:11	161:1 234:25	281:21	239:6,8 288:17
12 29:6 72:23	237:23	2004 99:25 100:1	202.662.8320 2:16
134:4	171 5:12 61:17	273:23	2020 239:2,3,8,11
12-13 89:23	172 61:22	2005 4:21,24 8:20	203 103:17
12.13 89:18	174 5:14 58:16	88:20 89:1 91:1	21 4:17 43:19,22
12.4 4:21 88:20	17th 84:22	237:14	44:10,10 54:16
120 5:9	18 118:14 119:3	2006 265:16 268:4	57:6 61:18 66:12
123 5:11	174:16	268:8	74:14 79:10
128 209:3	180 57:9	2007 101:12 268:4	107:16 112:3
129 45:24 77:19	181 57:8,8,9	268:8 279:17	270:17
12:34 95:15	184 45:8	2010 9:2	213.892.5330 2:24
12:35 95:19	185 45:4	2011 117:17,25	213g 250:25
12:49 104:9	186 44:23,25	263:6,8,13,19	215 119:10
12th 23:12	19 37:24 118:14	2013 120:10	21st 266:10
13 278:22,25	119:4	2015 118:12,25	22 4:20 88:18,19
	190 4:19 43:24	119:10 120:10	89:18 221:10,12
	44:10,12		250:16 275:21

[22 - access]

277:6 22nd 105:1 23 4:23 90:24,25 91:4 221:13 24 5:4 92:25 93:1 93:4 96:9,10 97:3 181:1 24th 47:20 48:5 25 5:6 96:20,21,24 97:2,25 258-1 53:7 2581 45:13,23 26 5:8 104:17,19 105:6,7,9 139:11 172:1 27 1:14 4:4 5:9 7:3 120:19,23 121:1 275 4:6 279 4:8 27th 7:5 28 5:11 54:18 57:2 123:14,15 124:10 282 4:7 288 1:25 28th 172:3 29 5:12 74:14,21 171:19,22 2989 1:6 29th 57:12 2:44 139:5 2:49 139:8 2:53 143:4 2nd 78:12 80:3,4 82:12	30339 3:5 31 5:19 61:19 194:2,3 31st 8:21 62:8 109:13 32 6:4 197:23,24 334 85:3 3431556 1:24 38 4:12 3:02 143:7 3rd 74:19 85:3 3t 241:21	65 112:2 66 105:18,23 140:1 678-594 142:22 68 139:24 6:10 274:20 6:19 274:23 6:32 286:22,25	255:2 260:17 abroad 135:4 abs 76:3 absent 201:2,7 absentee 27:4 62:11 76:16 99:25 100:2,5,19 101:7,9 101:16,16,18,19 102:1 131:9 141:16,21,22 142:1 219:22 221:3,4,5,7 222:23 224:2 245:2,4 246:17 249:16,17 276:2,4,13,13,16 276:20 279:10 absentees 208:9 absolute 28:7 absorbed 31:20 accept 283:19 acceptance 163:7 180:7 264:19,20 accepted 100:22 101:2,4 102:6 215:25 access 17:12 32:20 32:22,24 33:1,3,5 33:21,22 34:5 45:21 46:15,22,23 46:24 49:9,11,14 49:17 50:25 52:10 57:3,21,24 58:3,6 58:7,12 63:19 64:4,20 65:10,11 65:24 66:1,3 70:3 74:6,7 76:15 79:15,16,18 80:15 98:20 99:12 100:10,11,14 102:12,13 103:14 103:16 107:1
	4	7	
	4 45:23 4.5.2. 263:2 40 68:24 400 3:5 4038 3:13 404.612.0251 3:15 404.881.0700 2:7 43 4:17 44 221:13 45645 107:13 470 142:23 48 17:20 181:1 209:4 4:13 202:4 4:25 202:7	7 38:7,12 66:14 85:5,12 265:16 707 2:22 74 140:1 75 172:1 770.434.6868 3:6 7:00 218:25 223:18	
	4	8	
	500 1:18 56 189:20 594-0072 142:23 5:28 251:12 5:39 251:15	8 4:6 5:18 174:5 848 105:17 139:23 88 4:20	
	5	9	
	6	9 87:15 88:3 90 4:23 900 2:14 90017-3543 2:23 91 79:5,10 93 5:4 96 5:6	
3 38:14 44:14 30 5:14 174:1,2 300 205:4 221:8 30303 3:14 30306 2:6	6 53:8 62 80:17,21 64 110:25 139:24 209:4	a	
		a.m. 1:15 7:5 72:1 72:4 abilities 201:8 ability 55:4 58:5 62:22 102:4,25 146:7 201:1,3,6 260:16 272:4 able 28:14 50:25 69:22 70:2 154:16 155:9 222:20	

[access - answer]

110:15,15 114:8 122:13 130:17 138:3 145:13 149:17,19,23 150:2,4,5 151:6 152:17 153:20,22 154:16 155:10,14 156:11 157:4 159:6,8,11 161:15 176:21 177:13,16 179:3,8,10 181:10 181:11,14,16 182:3 183:1,3,4 184:10,15 186:20 186:22 188:20,22 189:13 190:18,23 191:4,9,14,16 200:25 201:2,6,7 202:23 203:8,14 213:3 216:1 229:25 232:1 233:1,4,8 234:9,16 235:11,12 253:10 258:11 280:12 282:9 286:3,4 accessed 47:13 70:1 86:18 116:12 149:25 179:2 181:5 182:25 accessibility 158:23 accessible 52:13 56:3 272:15 accessing 130:16 accompanied 266:10 account 218:16 accounted 170:13 221:15 226:6 accounting 182:11 226:4	accuracy 121:10 169:13,19 206:23 281:23 284:24 285:15 accurate 18:14,14 70:12 128:22 accurately 47:5 acquire 208:24 acquired 47:7 48:14 49:3 263:21 275:15 act 44:21 action 1:6 59:23 70:4,7,18 77:20 87:16 103:3 106:15 112:1 123:10 196:25 197:12 243:12 279:22 281:5,7 286:6 288:13 actions 59:7,16,17 108:16 259:10,15 active 210:19 211:1 278:3 activities 79:12 195:3,5 activity 80:4 194:21 actor 60:5,6 actual 20:21 62:19 134:8,12 138:11 259:2 266:19 ada 16:7 addition 26:14 282:8 additional 11:7 27:24 151:6 161:15 209:6 215:3 246:7 254:18 273:11	address 49:1 207:9 241:24 addressed 18:10 207:10 addresses 48:23 adheres 227:5 adjust 248:20 adjusted 137:24 249:1,2 administer 211:12 247:20,24 274:13 administered 239:19 administering 234:19 243:15 247:2 administration 203:22 administrator 269:3,4 adopted 266:14 advance 76:16 193:23 208:4,5 advanced 28:10 28:21 90:19 100:9 101:9 141:19,22 142:4 169:10 affect 53:20,22 54:5 166:6 affidavits 135:8 affiliated 174:17 aforementioned 121:12 agency 175:25 aggressive 5:20 194:4,8 ago 70:21 187:16 230:12 246:8 agree 110:5 198:10	agreement 128:17 128:19 176:18 191:13 agreements 129:13 air 112:9 251:20 akil 3:19 al 1:4,7 5:12 171:20 allegations 84:24 84:25 131:19 allow 91:8 allowed 32:6 100:8,9 137:14 223:12 allowing 51:17 64:23 102:21 alloy 1:17 alpha 75:3 alphanumeric 75:4 alter 164:12 165:4 200:15 alteration 165:3 altered 200:21 234:25 278:17 altering 211:18 amazing 220:17 amiss 28:9 amos 97:16 98:1 amount 182:2,17 ample 17:23 analysis 242:24 andy 69:12 angeles 2:23 anonymous 57:21 57:25 58:5 98:25 99:1 answer 70:19 117:6 139:18,23 147:3 194:15
---	---	---	--

[answer - automatic]

<p>197:11 201:23 216:20,24 242:15 257:4 259:23 273:5 278:10</p> <p>answered 261:15 answering 272:3 answers 39:1 anticipate 213:14 242:7 anticipating 215:23 anybody 71:10 118:22 158:6 221:5 anymore 35:25 137:1 236:5 266:2 271:12 anyplace 29:15 apache 67:9 apart 86:22 252:11 apologies 178:6 203:22 apparatus 217:19 apparently 71:13 appear 26:22 27:19 104:24 105:3 124:13 135:24,25 appearances 2:1 3:1 appeared 26:22 105:12 136:22 appearing 16:2,3 92:3 138:5 appears 44:25 60:8 90:1 93:5 97:12,14 121:3 136:23 application 30:22 49:12</p>	<p>applications 90:13 117:1 applng 75:2,7,10 75:13,16,17 appreciate 208:15 appropriate 43:13 43:14 approved 38:17 approves 39:1 approving 17:13 207:2 approximately 235:1 april 4:16 38:4,10 architecture 50:21 archive 132:16 206:18 archived 213:9 archives 132:10 area 218:22 234:10 235:13 277:5 areas 151:3 arrangement 130:15 array 116:4 arrive 218:15 article 5:19 194:4 194:8,11,19 asked 17:19 49:21 59:4 72:18 73:2,8 105:25 108:7 216:23 232:13 270:16 279:9 asking 61:8 70:24 70:25 243:2 279:2 asks 216:19 aspects 173:2 assertion 284:25 assessment 80:5</p>	<p>asset 236:2 269:13 assets 112:5 assign 101:13 102:8,12,13 assigned 41:8,10 41:12 94:14 100:6 103:6 121:11 134:16,18,20 139:21 152:9 221:5,20 250:4 assigning 99:22 assigns 94:6 assist 184:20 assistance 125:1 assistant 32:25 33:8 237:18 238:1 assistants 36:1,3 associated 26:18 26:19 40:2,5 42:17 76:14 94:8 103:12 107:3 137:10 140:8,9 153:7 224:18 249:24 association 122:14 238:7 assume 67:19 102:18 240:19 241:12 248:6,15 265:1 assuming 67:13 124:12 assumption 67:17 155:8 assurances 157:24 158:2 atlanta 1:3,19 2:6 3:5,14 97:12 attached 44:15 102:9 121:19 123:4 124:11</p>	<p>206:9 209:21 216:12,14 attachment 4:17 43:23 attacked 165:16 165:16 attacker 53:19,21 attempt 6:6 54:19 55:16 198:1,6 attempted 198:11 attempting 46:21 59:2 123:7 attend 236:13 237:3,5 238:5 attention 38:6 57:8 58:15,16 61:16 66:11 67:2 67:21 69:11 74:13 79:6 89:17 110:24 112:2 235:17 attorney 3:12 83:5 85:20 136:12 audio 15:10,22,23 16:6,7,10,12,17 23:1 75:14 audio.zip 75:22 audit 116:19 audits 246:18,20 august 47:20 48:5 48:13 54:18 57:2 57:4,12 61:19 62:7,8 70:2 87:15 88:3 116:15 authenticated 58:21,24 61:8,10 authentication 46:15 author 108:4 auto 214:6 automatic 214:2,3</p>
--	--	--	---

[automatically - ballot]

automatically 136:14 available 46:5 56:1 57:25 74:2 96:5 109:18 110:11 126:24 127:15,16,17 148:17 152:14 154:17 155:20 156:6 166:13 195:21 209:20 213:25 222:18 270:15 271:6,16 avoiding 123:12 awaiting 167:3 aware 48:4 55:14 59:17 70:19 73:10 74:8 81:9 87:24 99:21,24 102:10 135:23 136:2,4 158:16 170:3,18 170:25 171:2 172:11 173:4,17 174:20 175:16 188:16,20,22 190:7 192:12,16 193:22 194:17,21 195:3,4,20,22,25 196:7,13 233:2 235:10 242:3 243:17,19 247:19 262:3 265:4,6,7,10 269:19,22 270:1,4 270:10	35:14 37:2 51:14 54:16 57:6 59:3 60:8,10,12 61:24 63:2 70:15,17 71:19,20 72:5,24 72:25 74:14 82:9 95:19 96:4,7 100:19 102:5 104:13,14 105:24 109:23 112:22 114:7 117:21 122:1 133:4 139:9 140:21 143:8,17 143:21 145:2 146:17 147:23 148:3 149:17 155:19 156:12,17 158:9 159:15 161:18 162:3 163:23 164:6 165:19 178:13 180:3,18 181:1 182:7 183:17 191:4,6 199:17,20 202:8,9 203:22 206:12,17 210:22 211:16,17,20 212:5 213:2,8 218:11,14,17 221:16 223:16,20 225:2 226:2 228:8 228:10 231:1 232:16 237:19 239:13 240:13 245:21 246:6 249:20 251:4,16 251:18,20 252:3 255:2 257:22 270:17 271:15,18 274:24 276:15 277:3 278:14	284:2,12 background 232:24 233:13,16 240:5 backing 149:7 backup 13:4 29:22 29:23,25 30:3,6,7 67:4,12,17 148:12 148:22 149:1,2,2,3 149:4,9,15 213:12 213:18 backups 29:17,18 148:24 bad 60:5,6 badge 178:20 bag 178:25 245:20 245:20,22 246:1 bags 114:22,23 246:4,7,8 balance 103:13 baldwin 77:4 balleau 35:21 ballot 5:4,6 9:4 10:9,12,22 11:2,4 11:8,9,11,12,16,21 11:23 12:4,5,10,12 12:18,22,25 13:10 13:22,23 14:7,7,13 14:17,22,23 15:1 15:14,20,25 16:8 16:23 17:21,25 18:8,11,13,18 19:7 19:9 24:15,24 25:4 26:7,10,11,13 26:19,22,24 27:1,2 27:2,5,6,10,18,22 29:12,18,21,23 30:5,11,12 31:10 31:11 32:3,4,8,12 32:20,24 33:1,17 34:5,7 35:4,5,17	39:23 40:5,7,14,16 40:17 41:15,19,25 42:11,16,17 43:10 43:14 62:23 63:3 63:5 76:14 84:6,7 84:11 91:8,10,14 91:18,19,20,21,23 91:24 92:3,11 93:1,5,15,17,22,25 94:1,2,3,4,9,14,20 95:9 96:21,25 97:5,18,25 98:4,8 98:21 99:14,16,20 100:2,6,15,19,21 100:22,24 101:1 101:10,14,19,21 102:5,9,20,20,24 103:1,6,18 105:19 105:19,22 106:18 106:20,20,21 107:2 112:11,15 112:18,19,25 115:12,21 116:4 126:16 127:2,3,9 127:11,15 132:12 132:14,25 133:2 133:16,18 134:17 135:2,10,19,22,24 136:6,6,8,11,18,19 136:22 137:10 138:24 139:14,25 140:1,2,8,10 141:22 142:1 144:1,2,3,6,6,7,24 145:18 146:8 148:20,21 149:18 150:10,14,16 153:12,17,18,18 156:9,10,14 162:14 164:1 167:1 185:17
b			
b 1:23 back 8:14,17 10:4 10:10 11:11 15:9 16:15 17:20 20:8 20:12 21:2,5,6,8 21:20 22:2,7,13			

[ballot - bit]

186:3,6,11,12,18 186:21,24 187:22 206:25 207:1,5 210:11 220:2,19 221:17,19,20 222:6,7,7,8,9,10 222:10 227:3 244:7,7,13,14 245:4,9,10,17,20 245:20 246:1,4 247:8,10 248:3 249:18,18,19,20 250:18,19,20 251:1,2,4 252:19 252:21 253:4,6 254:5,6,8,19,23,25 258:18,19 262:9 262:12,14,20 263:13 balloting 27:4 28:10 62:10,11 99:25 102:1 208:9 245:3 ballots 11:20 13:1 13:15 16:24 17:5 17:7,14,24 18:7 23:11,12 26:6 27:22 30:12,25 31:5,15 32:9 35:12 36:23,23 37:5 39:12,18 40:8 50:23 60:21 63:20 81:5 91:25 92:1 101:8,18,24 122:3 125:21 127:16,16 132:21 133:10 134:3,3 137:3,7,7,13 138:12,14 144:1 144:15 163:18 175:7,8 204:2,2	207:25 210:22 218:4 219:23 220:2,6,23,25 221:16,21,23,25 222:1,2,5 242:18 243:21 244:2,3,3,5 244:18,19,23 245:6,14,15 246:12,15,16,16 246:17,18 247:3,6 247:21,25 250:7 250:12,20 bank 22:24 barnes 1:13 4:3 7:2,7,21 8:4,5 59:7 72:6 88:22 104:14 105:9 139:10 143:2,11 279:7 287:11 288:8 barron 65:19 base 40:3,4,5 114:12 134:16,17 134:18,22 235:1 276:7 based 17:6 19:3 41:9 42:6 59:19 62:21 84:23 103:15 107:4 109:22 110:22 138:22 165:1 168:17 197:19 200:21 207:10 211:12 265:20 baseline 165:8 bases 40:1 basically 11:5 12:7 59:12 60:3 80:13 155:23 163:16 167:5 169:21 187:15 227:6	228:24 277:3 basis 47:22 182:1 200:22,22 243:22 245:11 275:23 284:25 batch 229:17 bates 4:18 43:24 44:11 74:20 107:20 battery 215:1 bbrown 2:8 beaver 158:5,22 165:25 176:2,6 began 28:21 56:8 65:3 159:20 beginning 24:9 27:16 62:11,12 169:6 203:24 behalf 2:2,10,19 3:2,10 behavior 53:20,22 54:6 belief 200:19,23 200:24 201:4,5 believe 9:15 10:8 12:20 31:19,24 39:17 44:17 45:5 49:18 51:4 54:22 57:16 58:18 66:23 67:7,10 68:9,18 69:16 70:4,16 77:22 78:10 84:16 86:21 96:17 98:13 99:25 101:12,25 103:2 105:3,11,15 107:16,21 108:6 109:20 117:20 119:17 120:9,10 132:7 140:14 142:23 147:23 149:19,24 160:3	172:13 190:23 191:1,3 195:4 198:4 200:9 225:20 227:17 228:14,18 231:16 239:20 242:6 246:4,19,22,23 255:17 258:6 261:1,5,12 265:16 265:21 266:9 273:23 274:4 belinfante 1:17 ben 132:7 beneficial 267:3 bentrott 2:20 4:7 7:14,14 143:10,12 171:21 174:7 189:18,21 190:3,7 194:7 198:4 202:1 202:9 251:9 261:24 263:18 274:17 282:4,7 286:20 best 85:19 111:25 143:21 144:10 147:3 194:15 203:1 272:4 better 10:3 94:19 beyond 82:23,25 133:17 194:24 279:22 big 57:7 62:18 107:15 150:23 binder 228:5 birth 48:25 birthdays 48:22 bit 13:6 43:17 59:3 61:25 131:15 165:21 190:1,2 282:4
--	--	--	--

[bits - bunch]

bits 165:1 bjacoutot 3:8 blake 3:21 blank 60:1 95:24 99:13 148:10 blinders 175:7 blood 288:13 blue 124:21 board 4:14,22 38:3,9 81:4 88:21 89:8,10 90:16,21 90:22 127:10 147:13,13 156:4 170:10 192:21,23 193:1,7,10,13 224:6 bold 109:10 book 10:21 102:8 103:20 books 101:17 113:14 140:12 141:10 178:2 bord 4:14 38:3 botch 171:14 bottom 27:7 61:17 67:22 76:3 79:6,9 122:9,15 216:15 221:19 268:3 boulevard 2:22 bound 43:20 box 10:9 11:5,8,11 12:5,23 14:13,14 14:23 68:9,10 70:13 78:15 79:23 82:8 97:5,9 115:18 254:8 256:3 260:17 272:13,14 boxes 84:11 brad 1:7 4:12 38:2 38:8	brand 162:9 251:20 259:24 breached 199:8,12 breaches 190:8 break 71:24 95:13 104:7,15 121:20 139:1,4 189:22,23 190:1,5 202:2 223:19 251:10 274:18 breakdown 147:18 brief 38:14 279:3 briefings 175:21 175:24 bring 22:2 163:14 218:22 228:10 bringing 146:16 225:1 brings 213:16 brody 2:11 7:12 7:12 broke 29:21 broken 179:24 224:5 brought 21:2,20 81:3,15 113:9 117:15 120:3,7 191:4 192:25 204:8 220:15 223:16 228:8 245:20 brown 2:3,4 4:6 7:10,10 8:2,5 37:19,20 38:6 44:9 45:15,17 71:23 72:6,25 88:22 91:3 93:4 95:13,21 96:24 104:3,7,14,18 105:5,9 117:10	120:17,22,24 121:1 123:17 139:1,10 142:24 251:17 263:14 275:2,3 278:9,10 278:19,24 279:9 browser 196:4 bruce 2:3,4 7:10 8:5 45:14 104:3 275:3 brucebrownla... 2:8 bryan 3:3,3 7:16 7:18 279:1 btyston 3:7 buddy 266:11 build 18:18 24:11 31:6 32:4,5 35:13 47:25 60:21 66:19 68:10,13 82:10 116:20 130:6 134:15 137:3 144:2 167:2 244:6 248:21 280:25 builder 10:9,12,22 11:3,4,10,11,12,16 11:21,24 12:4,5,10 12:18,23 13:22 14:7,13 15:1 18:11 19:9 24:15 29:12,24 30:5,11 30:12 31:12 32:20 32:25 33:17 34:5 35:4,5 84:6,7 91:8 91:14,18,21 112:18,19,25 115:12,21 127:15 136:11 146:8 148:21,21 153:17 153:18 186:11,22 254:24	builders 13:23 25:4 32:4,12 35:17 43:10 84:12 112:11,15 116:4 144:1,6 150:10 153:19 building 9:4,5 11:8,19 12:12 14:7,11,18,22 15:14 17:21 18:8 24:24 29:19,21 31:12 32:9 33:2 34:7 35:11 66:16 68:14 80:10 84:3 84:3 91:10,21 102:21,24 144:1,2 144:3,6,7,25 145:18 149:18 150:14,16 153:12 162:14 167:1 179:12,12 181:13 185:17 186:3,6,12 186:18,24 187:22 204:21 234:17 252:19,21 253:4,6 254:5,6,8,19,25 255:15 258:18,19 275:24 276:18 builds 126:21 built 11:7,9 13:5 13:15 14:12 48:2 48:12 50:23 92:18 116:18 117:19,19 119:16 130:9 167:3 175:6 251:19 281:4 bulk 142:1 bullet 38:13 174:14 175:10 bunch 47:10
---	---	--	--

[bundled - caused]

bundled 114:21 140:14 burn 148:13,14 burned 19:9 148:2 148:7 burning 146:4 148:9 152:14 255:18 burwell 3:10 7:20 7:20 44:2,6 279:1 business 142:18 234:15 button 98:7 138:5 buttons 54:14 77:1 bytes 214:9	284:2 called 7:22 10:8,14 12:13 14:20 18:20 30:8 43:3 72:15 113:9 135:2 142:1 162:4 204:12 210:5 215:19 220:7 262:8 276:3 276:5 calls 13:25 18:5 117:4 139:16 259:22 cameras 181:12 candidate 16:5,5,8 16:9 75:23,24 92:2 97:10 200:3 200:11,16,17,18 201:14,21 216:9 candidates 15:5 16:3 38:16 97:11 capability 188:17 capacity 72:10 108:1,2 111:14,20 213:22 222:22 250:17 268:13 captured 93:18,20 card 15:17,19 20:22,24 21:1 53:1 76:10,15 98:16,20,22 99:1,2 99:13,19,22 100:10,11,12,14 102:12,13 103:8 103:14,16,24 104:4,5 106:1,6,7 106:11 107:1,5,12 113:19,22,22,23 114:6,7,8,11,14,15 114:17,18,19 122:6 137:16,17 137:18 138:3	141:18 149:12,25 149:25 150:2,3,4,6 150:20 163:20,21 177:13,16 179:2 181:5,9 182:24 187:4,6,7,8 189:10 189:12 205:7,19 205:22,23,24,24 205:25 206:7,9,10 206:12,14,15,20 206:21,22 208:22 209:3,4,13,14,15 209:17,21,25 212:23,25,25 213:1,4,12 214:23 215:1,19,21 216:1 217:7,8,9,10,18 219:6,9,15,15 220:8,15,17,21 221:10,12,13 224:14,15,17 225:22,24 264:8,9 264:10,12,15,17 269:4 276:24 277:1 279:21,23 282:9,18 286:4,4,5 286:6 cards 19:18,24 20:6,7,11,12,16 39:19 40:3 103:5 107:8,10 114:20 114:21 119:21 120:3,4,4,5 122:13 131:7,12 133:25 140:15,20,21 141:2,4,15 163:15 163:16,25 169:21 178:5,7,12,25 179:1 181:16,16 182:3,3,22 190:18 190:23 191:4,9,14	191:16,18 204:11 204:17 205:1,2,6 205:14,18 206:3,5 206:6 208:16,19 208:21,24,25 209:3,6,7 210:2 212:13 214:16,17 214:21 215:3 217:18,20,20,23 218:21,24 219:13 219:14 224:25 225:2 226:4 263:25 264:2 268:24 269:3,6 281:8 283:25 284:1 careful 22:15 carolina 138:22 267:15 carry 19:12 178:20 case 135:17 171:13 189:5 199:20 242:15 250:1 251:19 cases 193:11,16 218:8 cast 93:23,25 94:1 94:3,5,5,14,19 98:6,8 100:16 101:8,14 102:9,17 103:1 147:17 210:22 213:10 218:4 276:12 casting 100:2 262:20 catcher 136:12 cause 135:24 136:3 161:6 caused 131:20
c			
c 10:18,19 36:8 232:11 288:1,1 cabinet 190:21,22 190:22 191:25 cable 124:15,16 cage 146:9 calculate 210:20 calculated 132:13 134:5 165:5 220:11 calculates 165:9 calculating 164:4 164:8 219:10,11 calendar 225:11 238:22,25 calibrate 286:11 calibrated 286:16 calibration 286:8 california 2:23 265:11,14 266:7 266:12 267:13,14 267:16,18 268:1 california's 267:8 call 89:25 119:14 121:3 241:21			

[cc - class]

<p>cc 45:7 69:7 ccr 1:23 ccs 59:22 cd 19:8,10,10,13 23:8,9,9 27:25 28:5 37:8 145:23 146:1,3,4 148:2,7 148:8,10,14,15,19 149:12 152:16,22 185:15 186:14 202:14,16,19 212:9 255:15,18 260:5 cds 39:8 148:17 151:20 152:9,15 185:19 260:2,13 260:14,15 center 8:10,12,18 9:3,9 17:10,16 18:16,16 25:5 29:20 31:25 32:7 33:1,3 36:14 39:19 46:10 55:24 68:5 71:21 82:12 83:21 84:16 107:22,25 110:13 111:20 150:3,4 155:23 156:13 181:22,25 186:8 204:12 210:6,12 210:14 233:22 254:21 264:1 268:9 276:20,20 276:22 283:10 284:2 286:12 center's 9:2 10:16 central 11:5,11 162:6 222:18,21 247:14 centrally 208:10</p>	<p>century 266:10 certain 10:7 79:11 154:17 172:4 184:6 212:17 221:21 222:4 241:24 250:15 certificate 226:20 226:22 227:8,9 certificates 218:1 226:19,21 227:17 227:21,24 228:2,4 certification 21:12 147:8 180:12 226:18 236:16 certified 22:7 126:5,6,12,17 129:21 146:16 180:11 288:6 certify 22:1,4 146:18 265:18 266:2 288:7,12 certifying 21:18 ces 10:7,24 31:4 31:17,20 36:22 46:5 59:8 61:1,4 62:3 65:7 71:11 73:1 81:8 82:9 83:23 85:21 86:1 86:6,22 112:5 142:18 153:25 156:17 191:16 251:19 254:3,4 260:24 283:17,22 284:8,14 cetera 130:20 cgg 4:19 43:24 44:11,12,12,14 chain 177:19 179:21 218:15 chair 68:2</p>	<p>challenge 4:22 88:21 89:8,10 90:16,21,22 96:5 102:15 challenged 90:3 100:8 102:13 279:10,16 change 54:9 64:22 64:23 65:9 131:15 189:21 194:20 200:4,10 201:15 201:22 204:17 235:2 240:5 248:18 278:15 changed 56:4 101:12 151:18 157:11 171:3 172:25 173:2 175:18 235:4 275:9 279:18 changes 170:25 173:4 210:16 211:11,12 268:16 changing 210:12 210:12 charge 127:12 248:9 charging 188:1 chase 110:18 116:23 chat 241:23 check 15:10,12 16:13,17 21:21 30:25 32:6 55:17 97:5,8 133:9 191:25 192:4 196:18 197:1 checked 23:10 114:5 117:1 120:14 191:5 192:5</p>	<p>checking 16:14 137:19 286:3 checklist 40:12 checks 32:1 98:18 232:24 233:13,16 cherokee 77:4,5 chief 173:12,16 chip 224:21,23 choose 125:19,23 125:24 126:1 129:19 148:16 269:16 choosing 166:10 chosen 171:9 chris 35:21 173:15 176:8 cio 108:10,10 158:4,16 165:25 176:6 circle 3:4 202:9 circling 203:22 circulated 85:21 circumstance 213:7 circumstances 14:1 30:15 184:17 184:23 190:17 235:20 242:4 249:24 258:7,9 cities 130:25 citizens 135:3,4,5 city 97:12 128:5,6 128:6,7,8,9 130:8 130:15 266:13 civil 1:6 2:12 clarify 177:8 252:17 class 99:15 235:9 236:7,8,10 239:21 247:5</p>
--	---	---	---

[classes - completely]

classes 234:21 236:14,18,19 237:5,16 classification 214:25 classified 175:21 175:24 222:13 classify 163:7 237:8 265:15 clean 117:21 120:7 187:8 230:25 234:14 cleanest 150:24 clear 44:4 101:17 201:19 252:24 clearance 28:16 cleared 55:10,23 55:25 155:4 203:17 click 187:13 clock 169:23 282:1 284:22 285:1,7,18 clone 66:13 67:14 67:15,18 68:10,11 68:14 close 20:1,3 101:11,20 102:2 124:18 142:4 217:12 219:1,1 223:9,14,24 225:15 closed 122:7 124:14 closer 156:8 closes 223:8 closing 9:2 122:21 212:16 215:17 216:15 217:14 coalition 2:2,10 3:20 7:11,13 275:3	code 56:20 98:20 170:11 177:23 200:20 215:24,25 223:13 224:12,16 224:18,19,22 225:3,3 244:13 264:24 265:2 268:24 275:7,13 283:2 284:9,10,11 284:12 codes 136:11 282:23 283:1,11 283:14 284:14 colleague 143:18 collect 13:25 191:2 206:13,19 218:9 250:20 collected 14:6 20:4 20:14,15 106:12 122:3,11 216:6,8 219:16 220:12 225:1 228:5 245:17 collecting 228:2 262:18 collection 57:7 94:6 245:9 collects 20:25 218:13 227:7 230:3 262:19 college 128:7 color 124:23 coloring 92:3 columbia 171:16 column 27:12,14 27:16 85:7 90:5 90:11 91:24 122:5 combination 53:2 61:4 91:19 combinations 221:22	combo 39:23 41:2 41:3,12,12,16,18 42:2,11,12,13,20 42:21 43:8 99:18 99:18 103:15,17 105:17 107:3 139:21,23 140:8 276:7 combos 15:3 17:4 26:18,20 39:21 40:2 42:16,18 43:9 76:13 92:8 103:12 211:2 come 10:10 51:14 86:4 93:8 141:24 165:19 178:13 181:6,19 200:23 211:17 213:17 218:17 236:13,17 236:22 237:7 238:12 258:15,17 262:21 281:9 comes 42:22 183:8 211:19 235:13 236:3 250:18 coming 225:11 256:9 277:21 commands 114:2 commission 42:3,9 266:11 287:20 committee 2:12 173:21 common 225:18 229:2 communicate 40:17 155:25 156:17 158:9 255:2 communicated 81:2 167:11	communicating 127:23 241:20 communication 31:10 70:5 71:10 communications 86:15 142:11 194:25 compact 53:1 76:10 113:19,22 113:22,23 114:7,8 114:11,14,15,16 114:18,19,20,21 120:2,3 140:15,20 140:20 141:2,15 141:18 178:7 187:4,6,6 283:24 284:1 compare 117:21 118:19,21,23 163:9 164:22 compared 21:19 117:14,14 compilation 109:8 compiled 113:16 165:18 complaint 84:24 complete 16:1 59:2 197:9 completed 14:15 14:16,17 15:7 16:13 21:16 24:15 37:9 58:21 66:20 66:22 164:10 180:13 203:15 208:1 217:14 218:2,6 223:22 226:18 227:8 completely 70:6 70:13 160:3 202:11 229:17 270:13
--	---	---	--

[completes - contact]

completes 21:24 58:23 209:18 226:23 completing 212:24 220:6 completion 17:16 47:7 121:18 209:25 complicated 222:9 component 130:16 components 155:4 159:1 164:16 197:8 243:14 263:23 comprehensive 112:5 compressed 17:22 comprised 47:8 252:5 compromised 109:14 110:1,6,8 110:11,21 computer 5:5,7 9:18,23 10:3,6,11 10:14 11:3,4,6,9 13:1 14:8 15:14 15:15 16:21 19:14 19:16 20:13,16,18 20:23 21:19 27:8 29:13,21 30:12 32:21,22,25 33:22 35:4,12 68:2,13 93:2,6 96:22 97:1 114:24 115:3,8,9 115:12,20 119:16 130:13,13 144:2 145:3,12,13,20,21 148:9,21 149:18 150:11 151:11 153:9 154:8 163:6 163:9,19 177:1	187:5 204:8 205:9 205:10,12 209:14 218:23 229:1,7,12 229:24 231:20 235:14 243:14 252:10 254:25 255:1 262:14 269:19,21,23,25 270:2 272:6 281:10 computers 9:11 10:12,24 11:7,15 11:20 12:9,14,16 12:22 13:2,16 34:19 112:14 113:14 116:4,6,25 118:25 144:6,8 185:17 186:6 252:21 254:19,24 255:5,7 concern 71:11 122:20 160:23 175:4,5 concerned 62:3 122:20 concerns 158:6,17 158:18,20,21 196:15 concluded 82:7 121:14 155:12 264:17 265:17 286:25 concludes 286:23 conclusion 121:10 154:25 condition 82:15 115:19 conduct 247:1 270:20,25 conducted 233:13 246:18,20 247:5	259:16 262:4 conducting 179:25 conducts 247:12 conference 238:5 238:7,10,15,17,18 240:25 241:10,14 confidential 122:23 confidentiality 129:13 278:3 configuration 27:13 132:20,22 134:8,12 135:23 136:2,4,5 139:19 159:13 186:18 195:22 247:18 248:23 276:18 configure 91:9,15 95:11 125:16 130:4 248:22 256:23 configured 91:13 95:8 127:4 130:24 133:18 188:10 250:6 configuring 102:20 confirm 15:23 126:12 127:9 132:23 133:12 163:2 164:8,18,22 199:7 219:2 confirmation 199:12 confirmed 75:9 108:19 109:17 110:20 180:8 253:8 confused 152:19 conjunction 107:22	connected 11:8,12 11:15,21,23 12:3 15:14 17:3 26:17 39:20,22,23 43:9 68:16,18,19 94:2 103:13,15 129:12 144:8,24 205:8,9 205:11,12,17 243:16,18 251:5 254:19,25 257:8 257:12 258:21 connection 14:9 125:3 135:16 140:11 144:9 146:12 159:13,16 160:4,4 247:4 connections 70:14 conner 25:6 considered 51:24 considering 266:5 consistently 286:15 conspirators 172:4 constantly 158:23 170:6,15 constitute 192:2,7 construct 177:23 178:1 constructed 14:25 46:21 50:6,8,15 175:8 259:5,6 constructing 13:19 14:3 construction 112:10 contact 108:19,20 109:1 158:11 159:23 183:9 207:8
---	---	---	--

[contacted - counties]

contacted 81:12 contacting 59:21 contain 92:20 117:24 141:15 contained 75:23 76:12 100:21 113:6 136:17 147:19 253:9 containing 38:16 48:1 98:20 154:21 187:9 contains 43:6 87:18 227:4 content 15:22 32:9 100:25 130:8 240:7 251:2 contents 38:16 contested 147:21 continually 119:1 149:7 277:5 286:13 continue 192:9 234:24 continued 3:1 5:1 6:1 118:15 119:4 continuing 37:23 contract 126:5,7 128:25 129:2,8,16 184:18 268:13 contracted 19:1 126:23 131:14 contracting 125:9 126:2,20 127:21 contractors 34:4 contracts 184:11 231:15 contributed 132:4 control 84:6,7,8,9 111:6 129:19 180:17 217:7 269:11,13,14	controlled 65:4 181:25 controls 54:14 77:1 166:13 conversation 171:11 172:13 174:22 195:14 conversations 161:5 172:16 174:24 202:10 converted 231:1 conveyed 59:9 coordinator 240:18,20 copied 92:12 113:21 145:8 146:2 187:6 copies 16:23 20:7 23:4 26:5 29:22 31:4,8,14 57:10 73:22 104:19 114:16 147:23 229:18 260:15 copy 5:11 13:4 14:14,16,21,23 23:19,24 26:24 30:6,7 38:8 39:4 67:3 69:15 80:13 105:4 123:15 127:7 133:24 148:1,2,6,11,13 183:22 184:4,5 216:20,21,24,25 258:8 271:10 corners 128:7 130:19 correct 12:15 19:15,20 20:23 24:20 25:13,25 26:3 28:1 30:3,6 31:18 32:13,16,19	37:14 40:11 43:15 48:24 49:25 50:7 50:8,11 51:10 53:10,15,17,23 56:13 60:23 61:1 61:2,6 63:6 75:4,9 77:10 78:3,4,6,7 79:16,17 80:14 82:24 87:2 89:22 91:11,12,16,17 94:10,21 97:16,17 98:4,5,12,24 99:3 99:7,16,17 104:6 105:22 107:14 110:2,21 112:16 113:2,3 115:16,16 115:22,23 118:3 126:15,15 129:1 130:21 137:7,8 140:15,16 143:22 144:3,4,14 149:21 150:15 151:12,13 156:14 161:22,23 162:17 165:25 166:1 174:12,13 175:19,20 180:20 182:18,20 183:23 185:20,21 197:2 197:14,14 200:9 202:22,24 210:4 222:24,25 225:16 230:17 237:15 244:2,25 251:24 252:25 254:5,20 262:9,10 266:16 267:10 270:22 275:16,22 282:10 282:11,14 283:8 283:16 287:3 corrected 31:14	correction 25:18 31:13 correctly 91:15 correlates 96:7 correlating 103:13 correlation 107:2 corrupt 213:1 cost 227:20 242:19 242:24 247:19 249:6 costs 242:20 247:20 274:8 council 97:13 counsel 2:1 3:1 7:7 83:10 86:2,5 129:11 172:18 count 121:21 122:5 132:14 169:1,2 210:13 221:6 222:14 223:8 249:16 counted 100:3,16 101:5,10,22 counter 169:2 counties 13:17,25 17:15,23 18:25 22:1 25:15,17 26:1 27:18 30:24 31:9 36:18,21,23 37:2 39:9,12 40:24 51:1 53:13 62:25 63:3,9,10,14 63:17 64:23 65:10 65:10 110:15,16 118:6,14,20 119:1 124:2,8 130:7 133:1,2,3 138:13 138:15 140:13 141:9,20 144:17 144:20 145:14 147:2,4 151:20
---	---	---	---

[counties - crosshair]

156:1,3,7,10,16,23 157:1,3 158:10 159:6,15,23,25 167:2,2,6,11 168:13 169:19 172:5 176:15 182:15 185:20 191:6,15 192:20 192:24 197:4 202:14 204:3 205:10 207:24 208:23,24 209:5 210:25 211:3 222:12 223:14 224:7 225:8 227:19 230:10 231:25 232:15 235:23,23 236:1 239:4 241:20,23 242:3 246:5,6,11 248:12 250:3 255:2 268:23 271:7,11,16 274:2 277:7 counts 21:21 132:15 county 3:10,12,12 3:21,24 7:20 13:20 14:3,4 15:2 17:11,11,18,19 18:13,20,22 19:11 19:12,14 20:9,10 20:13,20 21:2,10 21:14,16,24 22:11 23:6,15,20 24:5 26:10 28:11,22 29:1,2 31:11 37:9 37:12,13 38:18,22 38:23 39:1 40:10 40:11 41:24 42:1 42:3,7,8,9,15,23	43:3,4,7 46:21 49:21 51:8 52:11 52:15,17 63:21 64:20,20 65:14,14 65:16,19,23 73:21 74:2 75:2,7,10,13 75:16,17,24,25 77:4,5 92:12 93:7 93:9,12 104:22 114:22,23 118:23 119:8,9,21 123:21 125:7,10,11,11,15 126:2,3,21 127:21 130:7,9,10,15 132:7,7,17 133:24 134:19,23 141:14 141:18 142:7,8,9 146:16 147:6,9 148:10,18,18 153:3 155:5,13,21 157:5,15,16 163:10 164:2 168:16 176:22,23 177:1,4,7,21,24 178:4,10 180:3,14 180:14,19,25 181:2 183:14,17 183:17,20 184:21 189:6 190:20 191:24 192:4,9,12 192:17 193:4 202:18 204:6,7,24 206:23 207:6,7,13 207:20 208:17,19 210:17,19 211:7 211:10,12,21 212:6,8,15 217:19 218:8,21 219:17 219:24 221:3,8,11 223:7,17 225:1 226:3,4,15 227:15	228:12,14,15 229:1,3,5,9,12,13 229:23,24,24 230:11,13 231:21 232:19,19,22,23 234:23 245:8,8,12 245:14 246:2 249:3,21 250:14 250:15 254:1,2 257:17,18 258:9 258:11,14 264:10 266:22 268:22 271:14,24,25 272:1,19,20,21 273:17,18 276:10 280:21 281:25 282:12 283:4,22 283:25 284:1,5,9 284:18,21 285:20 286:17 288:4 county's 19:16 20:23 130:14 226:11 couple 72:6 74:15 84:21 116:16 138:24 139:2 159:21 279:3,7 285:7,8 course 111:25 court 1:1 7:8 45:25 53:8 85:14 87:17 248:2 288:6 covered 119:7,9 204:1 215:10 242:13 273:9 cpu 144:23 145:1 145:3,9,17 146:5 146:11 153:22 186:24 187:12 258:18	create 15:17 76:15 99:12 100:9 102:11 113:10 137:16 140:23,24 148:14 163:17,19 163:25 165:5 169:21 184:4 191:17 203:8 205:7,14,18 209:13 213:25 221:11 229:10 247:1 276:24 281:13 286:15 created 31:7 98:20 114:10,17 131:10 131:12 141:17 204:11 205:6,19 205:24,25 206:5 208:16 209:9 229:11,19 235:21 262:24 276:9 281:17 creates 106:13 138:2 164:25 177:20 203:6 205:5 creating 97:4 100:10 103:16 137:17 153:3 204:1 209:9 231:19 242:18 244:15 creation 138:3 credentials 33:25 65:25 230:2 credible 60:9 crisis 5:22 194:5,9 critical 68:24 69:9 crosshair 286:12 286:14,14
--	--	--	--

[cumulative - day]

cumulative 276:5	17:12 18:17 19:8	30:21 31:7,8,12	112:9,14 116:11
curling 1:4 2:19	28:21 35:13 47:8	32:5,18 37:9,12,17	116:14,16 125:8
7:15 143:12	47:8,25 48:21	38:15,19,21,24	127:18 128:22
current 8:7 58:22	49:13 50:22 52:24	39:2,3,5 40:19,20	130:4,6 132:23
170:3 186:17	54:23,25 55:5,6,7	40:23 43:1,12,16	133:14 175:6
190:14 211:22	55:20,23,23,24,25	49:11,21,25,25	185:16,25 186:2
240:11 243:23	56:5 74:1 76:10	50:1,2,3,4,5,11,13	210:24 248:7,8,16
244:8 256:16,19	83:22,23 85:14	50:17,19,21,22	248:18,20,25
274:9 275:10	87:17 94:7 109:17	65:12,14,15 66:6	259:2,2 260:23
277:20 280:13	110:10,14 113:10	72:12,13 89:15,19	261:1 275:24
currently 8:8	113:16,21,24,25	91:2,22 92:5,15,18	276:17 280:25
36:11 58:4 82:16	114:12,13,18	112:23 113:8	date 7:4 48:25
108:11 129:21	125:8 141:17	116:18 118:2	62:12 118:16
138:1 154:1	144:25 145:2	125:16 126:20,24	223:5 272:23
158:20 170:18	146:10 148:25	127:4,8,22 130:1,7	281:21,24 285:11
189:6 191:8	154:24 155:2,3,11	130:9,18,20,24	285:14,16,19,23
244:24 246:5,23	155:14,14 157:1	131:2,3,7 132:21	285:24
246:25 252:5	159:17 178:1,10	133:12,14,24	dated 4:15 38:4,10
261:17 262:25	186:24 187:4,5	134:9,13,15	57:12 61:19 66:13
custodial 179:7,10	197:6 199:7,12	135:14,15,19	69:12 79:7 84:22
179:11 234:14	204:8 209:13	137:12,15 148:2,6	88:25 89:21
custody 218:16	213:3 214:5 215:4	148:12 153:2,25	david 2:11 7:12
customarily 81:4	219:8,9,9 230:4,23	156:10 163:14	day 24:11 28:9,20
cut 116:23 145:14	254:9,10 255:24	177:21,24 181:23	52:6 70:5 71:15
cutting 110:17	256:5 257:18,25	200:3,12 201:15	83:13 87:16 101:5
cv 1:6	259:9 260:11,13	201:21 202:19,20	101:11,21 102:3
cyber 117:21	260:14 262:15,15	203:9,14 204:6,7	122:1 132:19
cyberactors	262:23 270:14,19	204:10,19,22,25	133:22 134:3,17
174:17	270:25 271:3,8,17	210:17 211:2,7,13	141:12,25 169:10
cybersecurity	277:3	211:20 212:2	170:14 174:1
166:7 176:4,14	data.db3. 76:4	219:5 233:21	175:9 176:20
cycle 128:1 212:24	database 4:25	248:21 249:8,14	177:10 180:24,25
225:7,24	13:4,19 14:3,17,25	250:6 258:8,12,13	184:1,2,7 204:14
d	15:8,11,15,17	258:15,17,23	217:11 222:16
daily 9:3 79:12	16:14,16,19,21,22	259:5,7,8 264:19	223:7,12 224:4
245:11	16:25 17:2 18:10	281:4,6	227:10 234:15
damage 76:24	18:10,17 19:6,14	databases 11:6	239:20 245:18,22
damaged 206:16	19:16 23:5,19,21	15:16 24:8,11	246:6 247:6
damn 71:2	23:25 24:2,16,18	32:5 34:13 47:14	248:22 249:9,13
data 9:5 10:19	26:2 27:25 28:3,4	48:15 49:4 51:1,7	249:18 287:14
14:6,11,12 15:13	28:9,24 29:9	51:16,18,23 62:9	288:17

[days - device]

days 48:3,5 62:12 74:15,19 85:5,12 154:18 dban 270:2,3 dbrody 2:17 dc 2:15 deal 67:10 193:16 236:21 dealing 235:19 deals 90:2 dean 33:15 45:6 55:2 56:16,23 57:10 59:14 60:17 66:15 67:3 72:8 149:21 150:8 151:9 dean's 57:18 death 102:4 debate 47:21 debbie 67:5 decade 285:8 december 8:21 238:19 decided 100:7 239:5 265:8 deciding 111:1 decision 84:22 267:9,22 268:6 269:10,17 270:7 decisions 166:6 268:8,15 deck 163:21,22 declaration 45:13 45:18,22,24 53:8 56:11 declare 287:1 decontaminate 259:16,18 dedicated 186:11 deem 237:18 242:1	default 97:6 204:20 defect 132:4,22 defects 131:20 defendant's 38:8 defendants 1:9 3:2 4:12 7:17,19 38:1 definitely 171:14 definition 9:19,24 10:3 272:11 degauss 269:10,23 deleting 4:25 91:2 154:6 214:7 delineated 168:16 delivered 19:4 22:10 28:5 37:16 114:23 127:18 140:21 146:22 180:24,24 181:20 212:7 281:13 283:25 delivers 123:22 131:13 delivery 13:20 63:4,4 deloach 266:11 democratic 6:8 106:20 140:8 198:2,7,10 227:2 denied 58:3 denise 25:5 denying 159:11 department 36:13 68:3 107:22 149:10 157:23 159:5 175:22 238:12 depending 185:3 depends 238:25 deposition 1:12 4:2 7:1,6 37:24	286:23 288:9,10 deputy 36:4 derrick 3:24 describe 8:24 13:14 22:15 39:16 55:21 59:6 74:23 110:25 132:1 191:22 215:12 228:19 243:6,20 described 9:11 25:14 26:21 29:5 29:6 30:11,24 32:11 34:7 35:3 36:22 39:11 40:18 46:12 71:12 76:25 77:9 105:10 136:13 169:12 182:22 196:8 253:3 describes 52:21 70:3 74:24 describing 75:6 252:18 description 4:10 5:2 6:2 design 127:11 137:6,13 201:11 227:23 designates 169:5 designation 93:9 93:10 designed 222:14 222:15 designing 137:10 168:6 234:19 desk 14:8 106:11 144:7 233:24 234:6,7,8 254:24 desktop 15:13 dessert 25:6	destroy 83:7 destroyed 85:16 87:2,12,19 88:2,6 88:9 detail 13:7 203:21 detailed 256:11 details 160:6 172:20 detected 160:24 detecting 162:21 detection 123:12 determination 265:23 266:1 determinations 265:25 determine 54:19 55:6,7 56:19,23 57:2 70:1 93:14 132:3 161:11,14 167:22 262:5 determined 167:15 determining 268:4 develop 112:4 169:8,18 234:24 developed 127:1 234:21 developing 248:7 248:16 development 248:10 device 14:10 15:18 15:20 20:4 29:22 68:6 73:18 99:19 103:11 113:24 121:13,18 122:4,6 123:5 126:16 148:10 153:11,12 153:12,13,14 159:16 178:3 184:8 186:25
---	---	--	---

[device - document]

191:14 192:11 205:13 209:3,22 213:6,10,13 216:3 216:15 217:1,12 220:8,9,12 223:8 231:20 260:18,18 260:19 262:19 264:20,21 268:22 269:14 272:3 274:10 281:24 286:16 devices 111:24 113:12 120:8 121:11 122:22 131:8 149:8 177:3 180:10 182:9,11 182:12 204:22 208:25 220:4 223:19,21,23 275:12,14 diagnostic 169:22 285:25 diagnostics 285:24 286:7 diebold 4:20,23 88:19 90:25 differ 256:7 259:2 difference 16:10 93:24 165:8 244:13,15 252:6 259:7 differences 16:4 256:14 257:1 different 9:12 22:15,19 24:16 26:11 30:10 42:11 44:3 47:8,10 91:14 97:2 98:1,4 115:3,24 118:20 153:13 161:22 165:5,9 182:24	185:6,10 214:17 214:20 224:16 225:3 232:20 241:21 247:17 252:1,8 254:16 255:22 280:9,18 differently 95:9 differs 256:16 digits 48:23 direct 5:9 38:6 57:7 58:15,16 61:16 66:3,11 67:2,21 69:11 74:13 79:5 89:17 103:8 110:24 112:2 120:19 125:11 130:17 159:13,23 170:24 171:24 176:21 directed 175:12 directions 168:11 directive 248:4 directives 239:9 directly 37:13 58:6 103:7 125:5 125:6 127:23 130:3 142:9 144:8 146:8 177:15 200:7 206:14 222:17 260:5 director 8:9,11,18 9:1,1 32:25 33:2,8 33:10,14 35:25 39:21 55:2 59:20 59:25 107:25 172:18 173:12,15 176:7,9 195:6 199:5 243:3 266:22 directory 12:7 114:9	dirtier 179:17 dirty 150:22 179:15 disagree 53:25 disallow 57:20 disallowing 58:7 disbelieve 48:14 disclose 124:23 278:6 disclosing 96:15 disconnected 70:14 78:9,11 discovered 195:20 discovery 46:3 discrepancy 285:14 discuss 194:13 discussed 28:15 76:23 143:18 151:6 193:23 203:23 231:8 241:15 242:18 256:15 270:16 273:13 discussing 189:1 195:17 236:24 discussion 72:21 112:22 154:19 157:20 161:6 162:21,23 172:12 235:8 279:20 discussions 9:17 59:11 161:10,14 197:21 198:16 277:23 disk 263:22,24 display 16:4,11 27:10 92:4 98:21 99:14 114:3 230:5 displayed 15:24 114:4 135:10,11	211:19 displaying 10:16 displays 54:15 262:15 disposing 154:7 dispute 199:22 distract 5:21 194:5,9 distributed 68:1 219:19 254:1 distributing 204:2 242:18 246:12 distribution 51:8 73:24 157:1 209:5 227:24 district 1:1,2 17:4 26:18,20 39:23 40:2 41:2,3,12,12 41:13,15,18 42:2 42:10,11,13,20,21 43:8 76:13 92:8 99:17,18 103:12 103:14 105:17 107:3 134:19,19 171:16,16 276:7 districting 92:17 districts 15:4 17:6 42:4 43:9 92:7 division 1:3 119:17 158:8 168:11,12,19 172:14 173:1,3,5 174:22 236:20 dll 52:25 dlls 52:21 doc 203:2,3 document 38:10 44:11 45:13,23 53:7 58:16 74:20 104:21 107:19 108:22,24 109:20
--	--	--	--

[document - effort]

110:4 121:25 122:12 144:12 174:11 227:11,13 227:14,16 documentation 110:22 documented 183:9 documents 44:19 44:19 57:7 83:20 dog 136:12 doing 21:16 56:7 58:25 59:15,16 62:4,17 80:20 87:4 90:19 99:24 111:7 147:5 155:15 192:21,22 193:1,2 211:7 217:25 237:14 239:21 282:1 domain 70:11,13 257:10 donna 1:4 dot 49:4,5 202:19 202:20,25 203:2,3 203:5,6,16 double 21:21 43:21 doubt 46:18 47:2 47:17 49:6,7 51:21 doubting 47:22 48:19 download 17:13 28:3 46:4 48:14 51:1 56:1 65:22 downloaded 37:13 54:20 55:18 56:13 downstream 13:11 dozen 12:1	dozens 138:19 dr 119:19 drafts 36:23 39:6 drawer 234:6,7,8 drawers 191:25 192:5,5,10,11 drawing 59:25 dre 15:18,19,21,24 19:18 20:5 26:23 27:10,12,19 93:18 93:20 98:21 99:3 99:13 100:4,6 102:11,16,22 103:11,14,17 104:24 105:12 106:2 120:12 121:3 125:18,24 126:1,10,14 127:1 127:20 128:14,15 129:21 131:10 132:10,11,16 135:10,20 136:9 136:14,23 137:1 138:4 168:23 176:25 177:3,10 177:12,16 180:18 182:3 183:4 204:18 206:6,7,10 206:21 208:4,5 209:19,23 210:1 213:8,18 215:22 218:4 222:23 223:2 233:1,5 244:7 246:21 264:12,12 265:5 265:11,15 267:17 267:19 268:5,18 274:3,4,8 279:24 281:20 283:18,19 284:24	dres 20:2,15 90:19 102:25 119:22 137:14 163:15 164:1 169:22 204:4 210:22 214:6,17 224:2 232:16 234:20 241:18 242:11 262:8 264:6 265:8 265:17 266:2,5,8 266:12,15,18 267:21,24,24 268:2,3 279:10 285:21 drill 242:16 drive 136:5 145:6 145:9,10,15 185:23 186:12,23 187:13,15 229:14 229:15,18,21,22 229:23 230:19,21 230:23 255:20 256:4 257:22 272:2,8 driver's 48:22,25 drives 85:14 87:17 229:15 230:8 257:20 261:6 271:22 drupal 57:15 58:7 due 100:1 duluth 130:11 duly 7:22 288:9 duma 3:4 duplicate 114:16 123:11 duplicated 114:20 duplicating 114:15 duplication 114:17 141:6	duties 68:4 e e 4:17 10:18,19 14:2 18:4 31:10 36:8 43:22 44:14 44:25 45:1,6,10 54:17 57:8,9 58:1 58:17,20 59:6 61:17,21,24 66:13 69:6,12,15,17,21 71:8 74:16 79:6 80:18 83:10,17 142:17 195:6,9 232:12 288:1,1 earlier 63:23 96:4 109:1,4 112:11 135:17 148:20 149:16 169:12 202:10 230:23 239:20,22 247:15 249:15 253:15 258:6 270:17 279:9 easier 201:18 easily 156:10 ebay 190:19,24 191:20 192:1 editing 210:10 editor 204:12 210:6,11,15 edu 67:3 educate 156:4 educated 32:8 educating 9:6,21 effect 62:19 70:22 83:8 128:20 141:10 effort 56:22 57:1 60:20 70:19 161:10
--	--	--	--

[eighth - empty]

eighth 23:8 either 25:17 83:1 88:10,10 98:23 102:7 116:25 120:10 184:2 187:21 236:8 ejected 216:2 election 4:13,14,20 4:23 5:14,16,21 8:10,12,12,19 9:6 9:21 11:7 13:4 14:5,11 17:10,16 20:8,9,14,14 21:2 22:4 25:5 26:10 29:20 31:25 32:8 36:14 38:3,3,9,17 40:9,10,11 41:24 41:24,25 42:1,8,9 42:10 46:10 48:2 48:2,3,4,7,12 49:4 50:13 52:6 60:21 62:5,10,14 68:5,8 81:4,5 83:21 84:17 88:19 89:11 90:25 91:9,15,25 92:15,16 101:5,11 101:21 102:3,3 110:13 111:16,20 113:8,11 114:23 116:19 121:15 122:2 124:21 125:7,7,14,15,20 126:21 127:10,20 128:2 129:19,20 130:8,14 132:12 132:17,19 133:5 133:12,21,22 134:3,4,17 135:6 140:19,24 141:1,4 141:12,24 142:5 146:19 147:6,10	147:12,20,22 153:4,15,16 154:18,22,25 155:12 156:8,20 156:23,24 157:2 159:8 163:14,17 166:4,4 167:7 168:12,19,21 169:3,7,7,10,10,25 169:25 170:1,1,4,7 170:8,10,12 172:24 173:2,9,22 174:3,4,16 175:1,7 175:9 176:20 177:5,10,19 178:8 178:9,9,11 181:22 182:12 184:13,20 184:21 192:21,23 193:1,7,10,13,24 194:5,9,24 195:5 196:14,16 197:13 203:21 204:5,14 206:16 207:21 208:6,8 212:20 213:11,23 215:13 215:14 216:3,4 217:11,12 219:4 219:17,24 222:16 223:4,6,10,11,12 223:18,20,23,25 224:4,6 225:5,6,11 225:16 226:5,7 228:3,10,20 229:1 229:8,25 230:5,16 231:5,17 232:17 232:25 234:19 236:12,16,17 237:2,5,13 238:4,6 238:22,23 239:2,3 239:12 241:4,17 242:11 245:18,22	246:18,20 247:6 247:20,24 248:3 248:17,19,22 249:9,13,18 254:22 262:22,22 264:1 266:12 268:9 279:24 281:4,19,20,25 282:9,12 283:10 283:22 284:7,18 286:9,17 election's 134:15 220:9 election.edu 77:8 elections 3:22,25 18:16 107:23 129:18 156:4 158:8,10 168:11 168:18 172:14,18 173:5,12,15 174:22 175:5 176:7,9 177:22,25 184:16 186:8 193:20 195:6 199:5 208:10 214:5 217:23 218:10,11,13 219:17 221:17 223:16 224:8 225:4,23 233:9 235:23,24 236:20 237:17,17,22,25 239:10 241:18 242:2 243:3,15 247:2 264:19 266:19,22 267:17 274:5 280:2,24 elections.kennes... 46:9 70:9 75:1,8 77:8 78:6,11 79:11 81:19,23	87:19 142:16 elections.kennes... 46:7 elections.ksu 85:15 elector's 141:16 196:19 electronic 5:9 37:17 63:4 73:16 74:10 100:17,17 120:20 136:7 137:11 192:13,18 192:24 230:5 258:8 electronically 106:10 183:25 224:19 227:12 280:21 element 94:2 256:10 eligible 42:7,8 99:11 103:18 135:5 embedded 224:20 emergencies 28:18 emergency 28:7 30:15 37:12 189:5 258:7,9 emphasis 235:3 employed 8:8,20 25:4 71:12 72:9 266:3 employee 36:12,12 157:15,16 254:21 281:12 employees 36:11 166:14 178:19 233:7,17 255:4,6 emptied 155:1 empty 114:19
---	---	--	--

[enabled - executed]

enabled 188:8,13 256:4	252:24	180:3,5,6,13,23 182:13 183:8,9,13	everybody 141:16 141:21 150:3
encountered 156:18	entirely 189:23	183:18 184:1,12 184:15 185:1	exact 136:24 254:12
encrypted 39:9 72:13 151:22,25 212:9 256:2,4 261:6	entitled 6:5 197:25	191:12 192:14,18 193:5 206:25 208:1 209:1,2 215:18 224:8	exactly 117:24 124:5 162:8 213:15
encryption 51:17 51:23 152:2 255:23 256:10,12 268:21,23 269:7 275:5,7,11 278:11 278:17	entity 241:6 283:8	232:21 235:7,11 236:22,24 237:1 237:10 273:22 274:16 275:15	examination 4:5 8:1 118:11,13 143:9 265:14 275:1 279:5 282:6
ended 25:17 220:9 277:17 285:10	entrusted 111:23	equipped 188:8	examined 7:23
ender 220:7,8,17	entry 252:16	errors 30:25	example 13:16 23:20 41:22 75:3 144:10 157:15 159:2 166:9 168:24,25 172:2 180:18 183:4,5 211:9 221:3 250:14 265:10
ends 225:25 227:9	envelope 22:9 100:17,18 101:22 146:22 217:8 219:25 220:1,1 221:18 225:15,25 226:10 245:19,19	es&s 128:13,14,17 128:20,25 129:8 129:15,17,22,24 131:2 138:21	examples 98:3
enforced 60:18	environment 17:21 65:4 168:18 186:3,4 218:16 220:16 240:4 253:10,14	escalated 161:2	excel 167:16,17,18 167:20 282:19
engage 242:21	epic 10:15,17,19 10:22 74:1 84:7 113:2,4,6,10,17,18 113:20,21 114:24 142:4 155:3 161:17,18,19,24 162:1,4,7 186:4,13 186:17,20 187:5 187:22 253:6 254:4,9 255:14	especially 249:15	excellent 242:8
engaged 167:6 197:21	epoll 113:11,14 137:19 140:12 141:10 178:2	esquire 2:3,11,20 3:3,3,10	excuse 108:9,10 142:22,22 200:13 263:6
engages 163:2 164:18 241:17	equal 15:1,24 124:12 163:12 165:10 204:17	estimate 182:6 214:4,13,15 235:17 249:5,11 274:7	executable 12:17 12:19 35:2,13 52:21 56:20 117:7 117:13,15,23 118:4,6,12 163:3 163:11 164:13 165:13,16 203:4 254:17 260:22
english 3:4 7:16,19	equipment 9:22 100:4 121:8 123:22 124:4,8 126:3,6,9,10 129:21 131:1,1 168:17 169:20 170:11 176:16,19 176:21,24 177:3	estimates 242:19 247:19	execute 14:4 157:2 177:4 182:11 204:9 245:11
enhance 235:2		estimation 127:24 143:21	executed 59:13 287:5
enhanced 235:21		et 1:4,7 5:12 130:20 171:20	
enr 230:3,3		european 206:2	
ensure 233:4		evan 3:11	
entail 271:2		evans 3:21	
entailed 160:7		eve 193:19	
enter 24:12 49:13 210:19 211:3 226:23 279:25		event 85:25 86:25	
entered 24:16 188:7		events 212:17 238:25	
entering 92:6 244:10		eventually 13:10	
entire 163:1 173:25 204:4 218:6 238:9			

[executing - figure]

executing 147:4 execution 239:10 executive 33:2,10 35:25 55:1 exercise 91:19 92:10 170:8 exercises 49:22 exhibit 4:11,12,17 4:20,23 5:3,4,6,8,9 5:11,12,14,19 6:3 6:4 37:22 38:1,7 43:18,19,22 44:7 44:10,10,19 45:16 54:16 57:6 61:18 66:12 74:14 79:10 88:18,19 89:7,18 90:24,25 91:4 92:25 93:1,4 96:9 96:20,21,24 97:25 104:17,19,25 105:6,7 107:16 112:3 120:19,23 121:1 123:14,15 124:9,10 139:11 171:19,22 174:1,2 194:2,3 197:23,24 270:17 exhibits 4:10 5:2 6:2 37:24 exist 201:8 existed 55:23 74:3 260:6 273:8 existence 191:10 252:15 existing 116:2 160:1 219:5 247:11 270:14 exp 53:2 expected 253:19 253:22 264:23 285:21	expecting 218:17 experience 267:8 267:20 268:1 275:24 experts 194:18 195:20 expires 287:20 explain 203:1 253:2 285:14 explained 187:15 explanations 213:21 export 229:6,10 229:10 231:19 express 9:5 10:20 52:12 53:1,9,12,21 53:23 54:6,9,14 73:24 76:9,11,14 77:2 98:18 102:8 102:11 103:16,20 106:13 110:14 113:10,11,17,24 114:1,10,13 122:12 125:8 137:22,25 138:2 141:20 142:10 162:5 177:2,14,14 178:2,7 182:22 187:3 197:6 218:3 226:25 254:10 expressed 158:21 166:22,24 expression 94:19 extension 49:7,8 49:17,19 extensions 49:5 extent 157:22 161:11 175:3 197:15 198:23 237:24 241:8 259:19	external 14:8 253:13 260:14 extra 137:13 extract 20:6 51:17 extracted 21:1 101:21 113:7,18 extraction 261:9 261:11 eyes 207:7,18 <hr/> f <hr/> f 3:3 36:8 85:3 288:1 f2654hd4 275:5 facilitate 14:4 248:8,12,16 facility 80:6 236:10 facing 78:1,14 84:8 115:14 255:1 258:24 272:1,5,14 fact 51:25 121:25 133:20 134:24 172:11 266:7 267:13,14 277:14 factors 92:9 fail 272:25 273:1 failed 6:6 184:3,4 184:5 198:1,6 272:25 failure 155:15 191:23 192:13,17 failures 190:12 fair 58:12 60:19 62:5 73:13 98:10 124:1 137:11 140:7 fairness 109:4 fall 151:1 familiar 32:17 63:16 131:19 190:17 193:18	far 56:10 88:8,10 88:11 90:17 95:24 96:1 98:12 104:5 240:13 256:22,24 277:19 fashion 60:15 70:3 174:17 fast 222:3 faulty 135:23 fax 156:12 faxes 14:1 18:4 fbi 81:10,12,13,15 82:6,20 83:2 109:23 feasible 138:7 feature 100:7,8 167:17 fed 12:22 13:1 169:24 222:7,16 federal 45:25 53:7 135:1,1,2,2,5 175:25 177:24 263:21 feed 222:11 feedback 266:20 feeding 222:10 feel 171:23 174:7 190:3 196:19 239:22 feeling 175:4 felt 111:25 207:5 265:17 266:21 270:19 ferrill 1:22 288:6 288:24 field 90:12 94:25 fifth 23:6 figueroa 45:6 59:14 figure 168:19
---	---	---	--

[file - followed]

<p>file 1:6 11:9,10 15:9,13 16:15 17:13 18:17 19:6 19:9 28:13,21 29:3,3 35:13 47:19,25 48:1,2,6 48:11 52:25 53:2 54:8,11,12,13 57:20,24 58:3 63:20 64:24 65:1 72:16 75:12,14,22 75:22 76:3,9,10,22 76:25 77:1,11,12 113:16,24,25 114:8 118:12 137:22 138:4,8,10 140:24,25 142:2,2 142:6,7,9 144:25 145:15 146:2 148:13 153:7,20 153:21,22 154:6 154:24 155:2,3 164:25 178:10 190:21,22,22 196:2,3 202:16,17 202:18,19,20,21 202:23,25 203:2,2 203:3,4,5,6,16,16 204:9 213:2,9,18 213:24 214:8,10 229:6,6,8,10,10,19 229:19 230:2 231:19 244:12 256:2,5,9 258:10 258:21 260:4 262:23</p> <p>file.resources 76:18</p> <p>filed 47:14 83:16 85:6,13 131:4 171:15</p>	<p>files 10:20 12:6,7 13:8 15:23 16:6 18:25 19:1,2,4,5 24:4 46:4,16 47:9 47:10 49:17 53:20 53:22 54:2,4,19 55:5,17 56:24 57:3 58:6,7 70:1,3 73:21,22,23,25,25 74:3,24,25 75:14 77:7 80:13,15 113:8 114:12,18 144:19 154:15,21 159:6,8 186:12,24 186:25 195:21,22 213:25 254:1,7,9 255:24 256:1 257:16 258:4,4 271:9</p> <p>filing 38:11 45:24 53:8</p> <p>fill 284:3</p> <p>filled 48:15 121:9 157:16</p> <p>filling 121:16</p> <p>fills 147:9</p> <p>final 21:9 37:8 211:1 232:12</p> <p>finalized 38:18</p> <p>finally 17:5 39:8 39:22 40:7 176:8</p> <p>find 44:15 82:22 88:13,15 102:5 218:21</p> <p>finding 174:20 175:16,17 266:7</p> <p>findings 5:17 173:20,25 174:4,9 174:15 175:1,18</p> <p>finds 213:23</p>	<p>fine 207:20 278:9</p> <p>fined 192:12,17,20 193:4</p> <p>finish 24:10</p> <p>finished 23:13 24:12 66:23 212:18 220:5</p> <p>finishes 216:10,21</p> <p>first 13:24 22:25 23:23 24:17 27:10 27:13,13 28:16 38:13 44:12,23 54:22 67:22 70:4 75:3,16 90:18 91:22 97:15 121:9 121:24 126:2 135:22,25 150:2 158:11,11 163:7,8 163:10 174:9,14 205:23 207:2 211:10 214:1 218:25 219:5 229:16 231:7 239:1,11 258:16</p> <p>fit 9:24</p> <p>five 22:21 26:11 26:12 71:24 136:10,11,13 179:5 191:14 238:2</p> <p>fix 71:17</p> <p>fixed 71:17</p> <p>flash 53:1 76:10 113:19,22,22,23 114:6,7,8,11,14,15 114:17,18,19,20 114:21 120:2,3 140:15,20,20 141:2,15,18 178:7 182:22 187:4,6,6 214:25 215:5</p>	<p>283:24 284:1</p> <p>florida 172:5</p> <p>flow 13:8 22:14</p> <p>focus 11:2 62:13 109:7</p> <p>focused 242:4</p> <p>focusing 8:22</p> <p>foerster 2:21</p> <p>folder 12:7 14:20 15:10,10,12 16:15 17:9,9,11 18:20,22 18:23 19:7,8 22:25 23:1,2,3,6,7 23:8,9,9,10,11,12 23:16,17,18,18,23 23:24,25 24:8,17 24:19 29:19 31:7 31:15 34:13 52:12 52:15,17,18 64:20 66:4,8 74:4 75:13 75:16,16,17,19 142:8 144:12 145:5,8,14 152:1 155:2 186:16,16 186:21,22 202:17 229:20,21</p> <p>folders 22:16,20 23:14 24:4,14 29:6,12 31:17,20 31:24 55:11,22,25 73:21 152:23 155:1,5</p> <p>follow 72:7 116:17 124:3,8 169:20 170:9 202:10 208:14 224:7 282:5</p> <p>followed 27:11,11 87:3,6 154:24 155:7,9</p>
--	---	--	--

[following - gems]

following 75:18 171:10 follows 7:24 font 92:1 foregoing 287:2 forensic 55:17 forest 128:5 130:19 forever 98:9 forgive 272:7 form 17:1,8 19:2 74:10 121:9 122:10 124:13 125:19 147:8,9 164:13 226:22 236:3 283:24 format 187:14 formats 47:9 formatted 113:19 113:20 formatting 141:5 187:14 270:13 forms 147:24,25 177:5 formulated 244:14 fort 128:8,9 forth 81:13 158:9 201:10 221:14,25 227:6 255:3 257:23 288:9 fortunately 173:24 forward 31:20 45:9 60:16 92:19 117:16 183:20 231:22 246:24 forwarded 19:10 44:24 69:16 148:3 211:21 forwarding 59:5 125:12	forwards 45:2,5 found 17:25 18:13 18:14 28:9 52:6 73:1 99:11 118:16 119:5 132:16 156:14 190:22 191:1,19 240:6 253:16 265:5,11 265:20 276:23 277:5 282:21 283:5 foundation 117:4 four 22:21 39:17 48:23 49:1 85:5 85:12 114:12 133:25 149:19,24 151:5 230:9 fourth 23:3 frame 9:9 24:22 28:2 33:7 34:9 62:7 74:15 78:12 83:14 149:17 155:19 160:23 246:7 265:16 267:9 frames 175:5 framework 92:5 frechette 240:21 free 148:16 171:23 174:7 190:3 freight 185:5 fresh 237:9 friday 223:6 224:4 ftp 64:8,13,17 65:2 142:7,11 145:13 145:15 157:18 159:2,7,13 160:4,5 187:1 212:5 full 8:3 48:1,22 49:1,24,25 50:2 81:18 109:7	114:18 182:8 255:4,6 264:18 265:24 fully 50:10 66:12 fulton 3:10,12,21 3:24 7:20 85:13 104:22,25 221:3,8 221:11 250:14,15 288:4 fultoncountyga.... 3:16 fun 243:5 function 34:24 89:11 115:21 214:2,3 functional 30:2 50:10 functionality 102:7 167:14 206:24 functionally 34:16 functioning 171:1 171:4 further 175:2 195:17 215:25 281:16 286:20 288:12	gay 45:10 54:18 60:2,3,8 62:17 69:13 79:7 108:6 108:8 111:4 112:4 gbf 49:4,19 202:19 202:20,25 203:4,5 203:6,16 gear 81:11 86:18 gears 43:17 131:15 165:20 gems 4:21,24 5:4,6 10:2,3,4,6 12:13 12:14,16,18 14:10 15:16 16:21,22,25 18:17 19:14,16 20:13,16,18,23 21:3,4,19 26:15 27:1,8 30:21 32:17,18 35:2,12 37:9,12 38:15,24 40:19,20,23 43:1 43:11,15 49:4,10 49:13,14,25 50:2,3 50:5,6,10,13 51:1 51:7,16 62:9 65:11,13 66:5 72:12 77:14,17 88:20,23 89:19 90:13 91:1,4,7,8 93:2,6,18 95:2 96:22 97:1 102:8 102:16 103:3 112:9,14 116:10 116:14 117:7,13 117:15,23 118:1,4 118:6,11,25 119:14,21 125:16 125:18 126:19 127:4,21 130:1,4 130:13,13,16,17 130:20,24 132:13
			g
		gain 46:15,24 gained 33:21 110:15 gaining 33:22 gambit 5:20 194:4 194:9 gap 251:20 gapped 112:9 gather 147:7,7 156:22 gathered 18:2 132:10	

[gems - governor's]

132:15,21 133:24 137:3 147:17 148:2,6,9 163:3,5 163:7,8,19 164:11 168:22 177:1 185:16 202:19,20 203:3,4,7,8,10 203:11,12,13,14 204:6,7,8,9,10 205:8,10,12 209:12,14,16 210:10,17 218:22 218:23,24,25 219:2,10,10,11,12 220:16 223:16 229:1,7,9 231:20 232:7 235:14 238:11 255:13 258:8,9 260:22,22 262:13,24 280:25 281:6,10 general 8:24 9:8 83:6 85:20 91:8 129:11 136:13 172:18 174:21 182:1 261:21 generally 170:22 185:8 202:25 generate 16:17 18:24,24 19:8,17 23:2,8,10,12 40:21 152:8,24 153:4,6 153:10 282:24 283:17 generated 23:3,5,9 26:15 38:21 39:2 40:19 93:17 94:11 97:21 142:4,6 144:16 145:4,23 147:16 151:15 152:6,23 153:5	157:8,9,14 187:5 205:20 228:25 229:3,6,9 239:16 262:14 282:16,19 283:3,4 284:7 generates 94:12 94:13 97:7 98:7 283:8 generating 16:20 283:11 generation 153:8 209:25 215:5 generator 94:15 georgia 1:2,19 2:6 3:5,14 6:8 12:13 27:4 28:11,12 62:14 89:13 109:11 117:17 126:18 128:24 129:22 135:7 138:20,23 156:5 167:5 170:4,7,21 172:5 173:10 176:7 190:8,18 198:2,7 221:7 236:15 238:6 241:4 243:23 244:1,2,4,24 264:24 265:2,4 266:4,14 267:1,5 267:25 268:16,20 269:5 279:14 288:2,7 georgia's 176:4 267:9,21 268:6 getting 30:10 54:16 62:5 63:3 69:25 74:5 152:19 157:1 169:20 175:6,6,8,8 220:2 231:19	gigabyte 230:9 gigabytes 47:7 gilstrap 3:24 give 17:23 43:19 104:4 125:2 137:25 166:16 167:5 168:24 196:15 214:14 239:10 242:15 257:4 272:10 given 42:5 43:6,7 48:3 63:12 79:18 85:3 99:23 106:19 132:25 140:25 159:25 169:3 191:6 204:23 240:24 288:11 gives 105:2 130:10 216:6 glad 62:15 232:13 go 15:8 16:15 18:11 21:5,7,17 22:13,24 25:9 39:8 43:21 57:6 76:2 82:4 91:9,10 102:5 104:2 105:24 109:10 112:22 119:21 120:24 122:1 127:5 141:5 143:17 152:15 164:2 181:1 193:7 196:17,22 204:24 205:2,4 206:12,17 207:14,24 211:15 213:7,8 215:24 235:2 240:14 250:16,21 266:5 285:6 goes 27:24 98:8 99:2 118:22	130:23 187:14 205:16 206:23 229:9 237:19 250:23 251:1 256:25 262:17 going 13:7 37:20 37:21 40:24 42:7 43:18,19 45:12,15 59:12 71:19 90:23 91:23 92:2 104:16 105:3 111:10,15 111:17 116:16 123:18 139:1 142:25 143:20 165:20 169:2 171:14 180:18 189:19,21 197:6 199:17,18 207:21 208:14 213:15,16 219:1 250:21 252:3 257:22 269:24 277:24 278:2,6 good 3:20 41:22 202:1 207:6 218:19 245:24 273:4 277:9 278:8 gotten 159:23 223:23 232:14 235:16 governance 3:20 governmental 176:17 governor 133:6,19 136:19 governor's 131:16 131:21,24 133:1,8 133:15 134:5,9,14 134:20,24,25 135:9,21
--	---	--	---

[grand - hosted]

grand 147:20 graphical 167:5 203:11 graphically 166:24 grayson 109:16 110:18 253:16 gre 273:24 great 194:14 greater 13:6 green 69:12,18 70:3 71:12 74:15 75:9 77:9 109:17 110:19 215:20 224:17 group 149:2 158:17,18 169:18 248:6,15 guess 78:1 90:12 97:20 191:21 guessing 120:9 230:12 guidance 184:16 235:24,25 guide 4:21,24 88:20 89:3,19 91:1,5,7 guidelines 126:13 127:1 guides 88:23 guy 165:23 guys 59:20,21	hallway 123:19 hand 14:5,11 22:10 37:20 43:18 45:12 64:25 84:21 88:17 96:19 104:16 105:5,9 120:22 123:13 125:21 132:14 139:11 146:22 171:21 173:24 194:1 197:22 288:17 handed 146:22 handful 138:17 handled 231:22 handles 221:12,13 245:8 handoff 178:11,12 handoffs 178:15 handout 247:8 hands 60:17 111:24 178:11 197:4 248:13 handwritten 5:8 104:20 105:7 happen 19:23 24:10 28:17 206:11 236:14 happened 28:19 28:20 67:15 108:23 159:15 198:14 206:14 212:14 235:20 241:15 happens 154:21 213:5 223:18 228:7 hard 11:25 35:16 54:21 85:14 87:17 112:12,13 148:1 255:20 261:6	271:9 harden 55:3 59:18 hardening 66:17 hardest 36:7 hardware 34:16 34:22,24 35:2 84:2,19 111:24 115:5,6,24,25 116:1,7 117:8 126:14,15 161:22 179:24 188:25 233:9 254:6 259:24 274:12 hardwired 275:8 harris 35:21 harvey 173:15 176:8 199:5 243:3 hash 117:14,18,21 118:19,21,23 162:23,25 163:9 164:21,24 165:5,7 165:13 head 62:2,8 71:19 111:4 128:9 184:25 203:11 header 136:17,20 headers 76:1 hear 239:11 heard 135:17 172:13,17 174:21 174:25 hearing 59:12 199:19 251:18 held 83:21,24 84:19 100:3,17 101:14,20 178:14 189:4 223:17,17 236:7 238:15 239:14 269:15 help 157:2 168:19 207:23 248:11	helped 169:18 helpful 203:20 208:13 270:18 helping 40:16 169:8 hereinbefore 288:9 hereunto 288:16 hesitant 196:19 hey 159:14 hi 143:11 high 34:8,11 131:23 242:14,15 hill 132:7 hire 277:24 history 116:20 hit 94:5 148:25 212:20 285:5 hits 94:4 hold 23:4 35:2 55:4 72:20 83:11 83:19 85:21,22 86:6 87:1 101:24 145:6 178:8,9 183:16 221:10 276:25 277:2 holding 13:5 98:25 236:2 254:9 holds 35:12 177:7 250:15 254:7 home 48:23 49:1 homeland 175:22 238:12 honest 30:17 honestly 12:2,24 51:22 58:13 70:25 195:12 274:15 275:6,17 278:16 hopefully 98:1 hosted 46:13
h			
h 36:8 171:15 hack 198:11 201:9 hacker 194:20 200:10 hacking 6:6 198:1 198:6 half 122:9			

[hour - information]

hour 108:18 134:4 285:3	210:7 212:4 220:18 225:17,17	95:9 96:21,25 97:7,10 99:14	indicate 121:11 141:21
hours 17:20 159:21 181:1 234:15 278:22,25 285:7	230:20 231:6 233:12 251:22 258:2 270:21,23 283:20 284:23	114:18 132:13 images 27:2 120:8 120:8 132:15	indicates 106:14 108:24 184:6 216:5 226:25
house 33:5 84:13 189:3 259:12	human 251:3	immediate 160:23	indictment 5:13 171:13,20,22
housed 146:4 231:12 232:6 258:19,20 260:11 272:16,16 273:7	husband 140:3	immediately 70:6 78:11,16 159:10	individual 11:10 13:16 14:23 17:6 18:25 19:11 20:3 26:12,19 31:7 32:3 39:18 40:2 58:6 60:4,10 84:11 103:1 112:14 114:22 119:22 122:4 123:21 136:17,21 142:6,8 146:4 147:21 156:1 200:16 217:15 218:4 232:19 258:20,22 276:21 280:3
howard 25:6	i	159:20 161:2	119:22 122:4 123:21 136:17,21 142:6,8 146:4 147:21 156:1 200:16 217:15 218:4 232:19 258:20,22 276:21 280:3
https 46:7	ideas 277:21	impact 207:21 249:13 262:5	individuals 24:22 139:13 176:3,11 233:14
huh 8:23 13:12 19:22 22:17 24:25 25:16,20,22 27:23 29:8,11 31:1 34:10 39:13 41:7 57:14 61:9,20,23 62:1 63:7 65:18 70:10 73:5,7,12 76:5,5,7,19 79:8 85:8,23 86:8 89:2 89:2 98:2,11 99:4 103:22 106:4 109:12 115:13 116:5 140:16 143:3 144:18 145:24 146:13,20 146:24,24 149:22 149:22 150:18 151:21 154:20 157:21,25 162:15 162:24 165:24 166:5,8 169:14,14 182:5,16 183:2 185:14,18,18,21 185:24 186:9 191:20 194:12 199:21 200:5	identifiable 47:14 48:16	impacted 214:13	infected 259:20
	identification 4:11 5:3 6:3 38:5 43:25 44:10 88:21 91:2 93:3 96:23 100:20 105:8,20 106:6 120:21 123:16 171:20 174:6 194:6 198:3	implementation 57:24 248:4 277:13,17,25	infections 259:21
	identified 24:5,23 68:25 196:1 262:6	implemented 57:20 267:5	infer 58:1 108:25 109:2
	identifier 99:19 107:9,11	importance 235:9 235:22	infiltrated 259:20
	identifiers 221:18	improvements 66:18	infiltrations 259:21
	identifies 80:18	incident 108:23 109:7 252:13 253:8	inform 284:19
	identify 7:7 51:25 90:24 93:4 95:6 95:10 98:22 172:5 176:3,12 256:14 256:25	incidents 193:14	information 13:25 14:2 15:1,5 18:6 20:15,25 27:9 42:21 43:11 47:15 48:16 50:19 52:9 56:4 59:9,19,22 64:11 75:18 76:12
	identifying 94:2	include 48:22 66:5 134:9 179:7 257:7	
	identity 98:9 99:22 101:14 102:9,22	included 31:8 52:3 77:14 148:1 176:24 202:16	
	ids 200:21	includes 274:11	
	illustration 75:7	including 109:18 110:10 195:22	
	illustrative 77:5	inclusive 276:4	
	image 5:4,6 27:3 81:18,20,24,25 82:1 93:1,5,15,17	incomplete 229:4	
		incorrect 47:18	
		incorrectly 285:22	
		increased 235:17	
		index 4:1 5:1 6:1 40:12	

[information - involved]

86:3 87:18 92:17 92:20 96:10,13 103:7,9 104:20 107:5 109:14,18 110:1,6,7,10,20 111:16 112:24 113:6,13 114:3,5 116:12 119:17 122:11,16,17 132:9,11 136:24 140:13 141:7,10 141:12 144:5,20 146:1 150:11 155:5,10,16,18,23 155:25 156:1,20 156:23 157:5 160:20,21 163:20 163:23 164:3,6,7 167:18 172:22,23 194:20 195:14,18 199:11 200:19,25 201:2,17 203:7,13 204:25 206:13,19 208:13 209:16 218:14 227:6 244:11 245:13 253:16,18,20,22 253:23 255:19 257:14 260:9 262:13 264:16 268:2 271:13 272:16 273:2,6,11 280:3,12,21 285:20 informed 50:22 informs 42:21 infrastructure 5:15 174:3 175:13 177:17 initial 5:16 59:24 108:18,20 174:4,9	174:15 195:18 209:5 initially 135:10 191:11 initiated 160:18 injunction 199:19 251:18 inner 219:25 220:1 input 164:8 285:9 285:21 inquiries 159:19 insert 215:22,22 inserted 113:20 114:16 206:10 209:15 inserting 149:11 279:23 insertion 114:10 187:7 inside 52:11,15,17 inspect 126:25 132:9 192:10 inspected 113:25 133:15 191:6 272:23 inspection 118:24 inspections 163:5 install 117:7 260:2 260:3,15,17,19 263:22,24 264:2 278:17 installation 162:9 installed 12:17,19 117:13,25 123:18 160:11 162:10 163:3,11 164:19 164:23 165:12 167:23 180:10 260:1,12,21 263:1 263:6,12,20 264:5	264:22 installing 167:25 instance 52:14 87:5 135:18 157:15 180:16 193:4 212:12,14 252:12 258:16 instances 184:9 192:16,20 instructed 20:5 instructing 236:8 236:10 instruction 138:12 271:4 instructions 77:15 271:5 284:2 instructs 218:8 integrated 162:6 intelligence 173:21 intend 204:18 227:1 279:1 intended 155:18 155:19 167:8 intent 101:24 111:19 262:19 intention 111:13 interact 176:22 177:10 185:7,12 186:6 187:21 189:8,16 interacted 237:21 interaction 94:7 256:24 interactions 262:18 interested 174:8 288:14 interesting 282:21 interface 203:12	interference 173:9 interfering 62:5 interject 217:3 intern 3:11 internal 120:12,13 167:12 internally 167:9 internet 11:13 68:17 78:9 109:19 110:11 243:16 interpret 76:15 140:6 163:22 interpreted 101:23 229:7 interrupt 190:3 introduce 158:25 introduced 116:24 117:4 intrusion 109:4 197:17 inventory 112:5 180:15 191:8,17 271:21,22,25 272:17 273:13 investigating 81:3 161:6 investigation 6:7 81:7 82:2,7 109:22 132:2 173:8,18 198:2,7 198:21,24 262:3 investigator 80:19 80:19 81:1,6 173:12,16 191:2 investigators 81:2 178:16 involve 270:11 involved 22:4 40:9 87:9 90:21,22 108:1 111:1 227:23 238:8
--	--	---	--

[involved - know]

248:7,16 261:13 269:17 270:6 277:12,16,22 involvement 269:9 iowa 172:5 ip 78:14 isolate 230:23 isolated 187:13 234:22 252:9 issue 60:13 69:5 156:22 159:22 199:3 207:11,12 issued 106:21 107:1,2 109:21 122:13 133:16 141:22 142:1 191:3 issues 17:25 18:1,3 18:9 60:22 81:3 156:17 190:15 items 17:2 177:15 238:10 242:4 259:14 iteration 211:25	johnson 25:6 jordan 36:7 joseph 3:21 judge 84:22 87:14 147:14,14 judge's 84:23 july 65:17,17 85:5 85:12 288:17 jump 85:4 145:10 186:12 june 1:14 4:4 7:3,5 8:20 159:8 jurisdiction 15:2 43:7 131:6,13 204:20,23 206:8 265:7 281:9,14 jurisdiction's 184:18 jurisdictions 131:4 184:11 192:25 239:10	86:18,22 87:1,3,3 87:11 88:9 109:10 109:10 110:20 119:18 191:5 240:4 252:9 255:18 268:10 kennesaw.edu 85:15 kept 84:1 112:9 149:3,3 150:25 151:4 181:6 191:8 260:16 key 43:11,13,15 149:25 150:2,4,4 150:11,19 178:24 179:2 181:5,9 182:25 233:25 234:2,10 268:23 275:5,7,11,19 278:11,17 keyed 212:2 keys 268:21 kilobytes 214:9,9 214:11,11 kind 40:13,13 71:10 106:5,10 119:20 122:8 128:17 148:15 208:20 225:9 king 33:11,12 44:24 45:5,9 54:17 55:2 56:16 56:23 59:13 60:17 60:24 68:2 70:5 71:2 78:2 149:20 150:8 151:9 king's 35:23 knew 93:11 98:13 100:24,25 111:7,9 111:10,18 123:8 152:15 253:20	know 11:18 29:25 30:1 33:24 34:3 35:7 45:2 47:1 48:8,10,17 49:2 50:14 51:22,23 52:21 55:3,19 56:6,8,10,14,18,21 56:22,25 57:1,5,15 58:14,24,25 59:14 60:4,5,13 61:10,12 61:13,15 66:20,25 67:8,11,13,14,16 68:19 69:4,5,8,10 71:5,7,8,16,20 72:9,11,16 73:20 74:1 75:11,15 78:18,19,20,22,24 79:1,3 80:19 81:14,21,23,25 82:13,15,18,19,21 83:9,10 84:25 86:9,11,12,13,15 86:24 87:5,11,13 87:23,25 88:1,2,6 88:7,9,10,11,11 89:5,14 90:8,9,10 90:14,15,17,21 91:22 93:12 94:13 95:1,4,7,22,25 96:1,1,3,5,7,16 98:15,15 99:1,5 100:25 102:16,19 103:8 104:5 105:13 107:4 108:9,10,14 109:2 109:4 110:7,9,13 110:18 111:2,3,17 115:19 119:2,7,9 121:1 123:21 124:7 128:19 130:25 132:6
j	k		
jackson 33:9 149:20 150:8 151:9 jacoutot 3:3 7:18 7:18 jane 2:20 7:14 143:12 janitorial 150:19 january 8:15,16 jason 45:6 jbentrott 2:25 jeff 44:13,14 86:4 jessie 67:5 job 1:24 13:24 155:15 160:16 201:17	k k 1:22 2:13 171:15 288:24 kaplan 23:20 kaye 3:10 7:20 120:24 kaye.burwell 3:16 keep 31:4 55:12 102:9 106:9 123:25 183:19,25 184:5 193:15 233:19 234:2,3 237:9 241:5 277:8 keeps 106:25 kemp's 5:20 194:4 194:8 kennesaw 8:19,20 13:23 46:11 68:4 69:19 71:13 72:10 82:5,8 84:17,18		

[know - level]

133:11 138:10 148:16,19 149:11 149:14 151:14 152:2,5 154:4,12 154:13 156:21 157:7 160:10,14 160:17 161:2 162:11,12,18 166:20 167:21 168:15,17,19,20 169:4,5 171:11 173:6,13 175:17 178:18 179:3 188:24 191:11 193:8 194:22 196:6,17,18,21 198:14,18,20,23 199:14,15,22,23 200:2,11,15,17 201:7,9,10,12,14 201:20,23,24 204:21 207:10 208:20,23 211:1 212:18 214:13 215:6,7 219:20 220:6,12 224:10 224:11,12 226:9 226:13 227:5,20 231:18 232:15,18 232:18,21 233:6 235:3,18,18 236:23,25 237:9 237:21 238:11 240:2,13,15 241:5 242:16,19,23 244:6 246:6 248:1 248:13 249:10 252:5,6,7 257:5 261:4,8,11,17,19 261:21,23 262:25 263:3,16,19 264:4	264:25 265:1,3,9 265:13,13,23,25 266:21 268:11,12 269:20,24 270:3,5 270:12 272:4,5,12 272:18,19 273:4 274:15 275:6,10 275:11,12 276:2 276:16 277:19 278:10,12,14 282:15 284:11,18 284:20 285:11 knowing 139:19 223:11 285:15 knowledge 46:20 88:12 130:2 147:3 147:5 197:19 225:19 233:16 243:22 246:19 256:11,20 268:19 knows 98:12 103:17 168:22 kovalev 172:3 ksu 8:22 25:9 31:4 45:21 55:3 58:18 59:19,24 60:18 61:5 65:7 67:3 68:18 71:11 78:15 78:15,23 79:3 80:1,2,7,11 82:11 82:13 83:1,10 86:2,5,10 107:22 108:11 109:8,21 109:25 111:4,5,24 152:20 161:18,25 162:17 191:16 252:2,12,15,18,25 253:2,4,8 254:18 255:12,16,21 256:8,17 259:12 259:17,25 260:1,4	260:11,24 261:2 261:25 262:6 269:10,12,13 270:18 271:18 273:12 283:10,17 I I 232:11 I&a 281:25 282:1 lab 117:20,20 263:22,23 label 107:20 153:4 153:5 205:19 206:8 209:19,23 209:24 labeled 4:19 43:24 44:11 74:20 215:20 229:3 labels 209:9,9,11 lack 94:19 lacks 117:3 lamb 44:25 45:13 45:18 46:2 52:14 53:9 54:20 55:18 56:11,12 57:3 59:6,8,9 60:9 70:1 73:1 74:6 108:20 110:18 116:11 154:16 155:9 253:17 lamb's 45:5,9 59:24 language 58:13 272:9 lapse 190:10 191:23 192:3,8 laptops 188:3 large 21:25 43:18 largest 128:4 launches 6:7 198:1 198:7	laura 25:6 law 2:4,12 279:17 lawrenceville 130:11 laws 287:2 lawsuit 84:5 85:5 85:13 lawsuits 83:16 lawyers 2:12 143:1 lawyerscommitt... 2:17 layout 26:6 lays 27:6 lead 42:11 256:18 leading 60:20 142:5 159:7 239:8 274:5 leads 285:17 learn 266:7,18 267:17,19,23 learning 196:24 197:12 lease 126:9 131:1 leasing 130:22 leave 164:15 leaves 256:3 ledford 37:24 left 27:7 60:17 197:16 216:14 legal 83:9 86:2,5 101:3 126:4 legally 101:7 legislative 101:23 239:6 leon 8:4 letter 44:13 letting 60:12 level 20:20 21:11 21:12,13,14 34:8 34:11 42:23 51:22
---	---	---	--

[level - looked]

52:16,17 115:9 148:10 163:10 176:5 177:1,21 178:4 207:8 210:18 221:7 222:19,21 242:14 242:15 249:3,4,17 249:21 254:2 257:9 264:10 272:1 273:17,17 273:18,20 274:1 276:2,16,17 lewis 173:16 lg 135:16 lg's 132:8 135:18 license 48:22,25 129:6 lieutenant 131:16 131:21,24 133:1,6 133:8,15,19 134:4 134:9,13,20,23 135:9 life 225:24 lightning 148:25 limit 275:20 limited 155:22 197:20 221:2 limiting 62:22 65:1 line 47:24 61:7 112:12,13 138:16 144:9 196:8,11 213:2 236:6,20 280:6,17 lines 243:18 277:22 link 106:6,11 linked 252:22 list 24:13 43:3,4 76:13 77:5 140:23 141:16 142:2	177:8 191:17 196:20 251:3 282:24 listed 45:7 53:3 97:11 135:21 190:18,24 listen 18:5 193:8 listing 205:5 lists 47:10 243:7 lite 52:24 literally 13:3 28:20 80:6 162:4 little 13:6 43:17 59:3 61:25 64:1 131:15 163:17 165:20 189:25 190:2 282:4 littlefield 1:17 live 42:6,6 104:3 135:4 lived 139:13 llc 1:17 2:4 llp 2:21 3:4 load 14:22 15:13 15:15 16:21 19:13 145:2 163:14 213:23 loaded 76:10 145:1 146:1,10 185:15 204:7 213:11 260:8,13 264:20 loading 149:12 264:2 loads 209:16 local 14:13 16:21 49:22 75:25 76:1 76:1 163:9 184:11 204:7 273:25 286:9	locale 147:14 locally 156:12 163:6 164:2 178:4 183:15 234:23 286:17 located 33:3 235:15 240:15 location 11:11 16:18 20:8 21:15 21:20 30:18 43:7 53:17 62:25 103:11,18 121:4,7 121:12 123:22 133:25 137:15 139:20,20 145:16 148:12 156:21 204:14,14,15,16 204:19,23 205:1,2 205:4,24 206:3 208:5 213:13 215:15,16,18 217:2,22 219:13 221:4 222:16 226:23 227:10 228:11 229:11 235:12 245:18 247:7 248:22 249:23 250:1,2,5 258:10 280:13 locations 17:3,4 26:16,17 39:20,21 43:8 64:21 92:9 133:3 134:1 145:14 204:12 205:3,4 208:6 219:12 223:25 249:9,13 260:2 267:15,16,16 285:2 lock 178:24 185:23 233:25	lockable 229:15 230:6 233:19,20 257:20 258:25 locked 145:11 146:9 179:1 229:23 234:7,8 locking 145:11 log 64:23 65:21 114:9 159:9 logan 44:25 45:5 45:13,18 52:14 59:6 109:16 116:11 154:16 logged 65:24 logging 63:10 64:7 logic 121:10 169:13,18 184:13 206:23 281:23 284:24 285:15 long 3:11 8:11 56:23 57:2 116:19 162:6 187:16 189:18 190:4 213:19 214:12,15 222:9 241:5 246:8 249:11 longer 54:25 56:1 74:3 115:17 190:1 265:18 270:15 look 15:25 28:12 38:13 50:18 54:23 60:7 61:24 67:22 85:2 89:19 91:4 108:15 109:9,9 206:25 249:8 251:2 looked 24:7 32:3 132:23 133:1,11 133:14 135:15,16 194:22 253:8
--	--	---	--

[looking - markups]

looking 33:18,18 55:8 57:18 81:1 89:23,25 93:7 96:9 133:18 162:22 217:25 218:2 looks 77:16 211:10 los 2:23 lose 148:25 284:11 lost 98:9 lot 21:23 45:2 81:2 179:16 231:14 235:6 278:3 love 213:14 lucky 191:19 lunch 104:8,15	177:11 183:4 184:10 204:18 217:16,16,17 222:24 223:3,14 223:15,15 233:5 235:14 246:21 264:5 268:20 273:16 274:3,5 macon 236:11,13 239:14,20,23 241:15 magnetic 150:6 magnitude 127:19 mail 4:17 27:4 31:10 43:22 44:14 44:25 45:1,6,10 57:8,9 58:1,17,20 59:6 61:17,21,24 66:13 69:12,15,21 71:8 79:6 80:18 83:10,17 131:9 142:17 208:8 219:22 245:2,4 246:13,17 249:19 mailed 74:16 245:6 250:12 mails 14:2 18:4 54:17 69:6,17 195:6,9 main 71:18 165:22 235:8 maintain 123:23 124:8 176:19 177:20 189:2 215:2,4 237:10 240:11 245:10 284:14 maintained 10:5 55:24 64:9 73:18 73:25 101:18 117:8,12 141:2	153:16,17 178:4 193:17 208:19 228:15 236:10 241:11 245:22 255:23 263:25 284:15,17 maintaining 224:8 238:13 maintains 193:13 226:15 maintenance 129:4 makers 268:15 making 16:2 58:11 62:13 151:3 187:16 210:2 226:5 242:3 250:5 267:9,22 268:6 269:17 270:7 malware 116:24 117:2,4,24 119:25 162:21 163:3 164:18,23 165:12 165:15 manage 149:8 160:15 managed 9:3 116:8 management 49:4 49:10 89:12 277:11 manager 217:5 218:7 224:14 277:25 279:22 280:4 manages 149:8 245:9 managing 67:11 247:7 manipulate 201:1 201:3,6	manipulation 211:13 manner 55:5 manual 77:17 manually 43:11 106:10,12 212:3 manuals 271:4,5 273:13 manufacturer 128:14 mapping 167:17 march 69:12 70:2 74:19 75:1 78:12 78:12 79:7 80:3,3 80:4,12 82:12 108:23 109:13 160:22 161:1 252:13,13 marilyn 3:20 44:14 mark 45:15 97:9 104:17 171:22 174:1 194:1 marked 37:21,21 37:25 38:4 43:19 43:24 44:9 88:17 88:21 91:2 92:24 93:2 96:19,20,22 98:19 105:8 120:20,23 123:13 123:16 125:21 138:2 139:11 171:20 174:5 191:5 194:6 197:22 198:3 218:2 marking 45:14 marks 3:20 4:18 43:23 44:15 markups 31:15
m			
ma'am 143:14 273:10,15 machine 5:10 26:23 93:19,21 99:3,5 103:14 106:3 120:20 121:4,21,22,23 177:12,16 180:18 181:20 183:5 200:2 205:20,21 206:13,13 213:19 215:22,23,25 216:5,6,8 217:4 218:5 223:9 233:1 264:18 266:21 271:23 272:18,19 274:8 281:20 283:18 286:11 machines 19:18 20:5 120:12,14 123:18 130:23,23 131:10 132:10,12 132:16,18 135:20 137:1,1 176:25			

[marriage - mode]

marriage 288:14	meet 239:4 268:11	208:24,25 209:2,3	203:8
martin 3:21	276:17	209:4,6,7,13,14,15	middle 66:14
mashed 98:7	meeting 58:22	209:17,21,25	80:18,24 90:3
match 126:17	126:25 127:9	210:2 212:13,23	midterm 193:20
132:11	193:7 239:1,6,7	212:25,25 213:1	193:24
matched 134:6	meetings 62:22	213:12 214:12,16	migrated 112:24
matches 126:12	193:10,15	214:17,21,23	162:11
material 131:13	megabyte 209:3,4	215:1,2 217:18,18	migration 65:7
materials 147:7	209:4	218:21,24 219:6,9	mike 119:19
218:9 239:14	megabytes 214:11	220:15,21 221:2	million 47:15
248:11	melanie 240:21	221:10,12,13	48:16
matt 67:4	member 15:12	261:6 263:25	millions 109:17
matter 92:6 222:8	16:20 184:19	264:2,8,9,10,12,15	110:9
222:10 248:25	218:7 266:10	264:17 276:24	milsteen 4:17
276:10 288:15	268:10	277:1,9 281:8	43:23 44:13,14,20
max 139:3	members 4:15	memos 52:12	86:4,6
maximum 277:4	38:3 43:5 156:4	mention 223:2	mind 143:17
mcclouth 261:12	172:18 236:9	mentioned 36:10	183:21 202:12
mdb 49:5,7,8,17	238:11 241:3	63:23 130:25	mindset 101:25
mean 26:25 73:20	membership	140:11 148:20	mine 231:24
79:2 122:19 123:3	238:13	149:16,19 154:16	minute 70:20
126:14 165:6	memory 15:17,19	179:23 209:8	71:24 194:10
176:6 200:8	19:18,23 20:6,7,11	210:5,18 211:9	285:3
206:15 259:18	20:12,16,22,24	231:4 232:10	minutes 139:3
272:8	21:1 22:24 119:21	284:21	189:20 278:23,25
meaning 28:8	120:4,5,12,13	mentioning	mis 286:16
136:8 141:11	122:6 131:7,12	172:19	mismatch 165:19
160:5 238:10	133:25 137:16,17	merrill 33:11,12	mismatches
means 64:10	137:18 149:12	35:23 44:24 54:17	118:17 119:6
155:15 270:3,5	152:20 163:15,15	56:7 149:20	164:14
meant 117:22,23	163:20,20,25	merritt 158:5,15	missed 143:20
196:1 244:18	169:21 178:5,12	159:14 165:25	223:1
270:13	181:16 182:3,3	176:2,6	missing 185:12
mechanism	189:10,12 204:11	met 8:6 143:11	mission 155:24
137:19 145:11	204:17 205:1,1,6,7	method 99:21	266:7
229:13	205:14,18,19,22	152:2 210:13	mistaken 231:8
media 126:8	205:23,23,24	michael 1:13 4:3	239:22
181:17,19 185:7	206:4,5,6,7,9,10	7:2,7,21 8:4 278:5	mistakes 32:1 37:3
186:5 187:20	206:12,14,15,18	287:11 288:8	156:15,15
189:8,15 215:5	206:20,21,21	microsoft 49:9,11	mode 169:25
281:13,17	208:16,19,21,22	49:14 202:23	170:1,1 212:21,21

[modified - newer]

modified 265:2 modify 53:20,21 54:5,8 module 66:8 mofo.com 2:25 moment 71:7 158:19 monday 195:5,10 196:14 monitor 235:13 monitoring 133:22 month 132:8 225:12 monthly 242:6 months 70:21 71:14 108:21 110:12 moore 58:17,17,18 61:18 62:16 68:21 morning 57:19,20 121:15,24 143:19 195:5,11 216:13 morningside 104:3 morrison 2:21 move 15:9 16:16 18:19 19:7 28:21 34:14 138:6 186:3 186:15,16 232:20 235:3 256:5 265:8 moved 18:22 23:23 24:17 30:18 30:19 56:6 254:3 257:19,25 258:10 260:24 moves 186:12 moving 8:17 24:13 186:23 246:24 mueller 171:6,7,9 171:12	multiple 42:2,3 47:7 51:18 83:16 139:20 185:3 194:18 220:25 225:23 249:10 250:4,7 252:12 municipal 125:14 125:15 126:21 129:18 280:24 281:3 municipalities 125:2,5 127:20 129:16,23 130:5 municipality 125:9,13,17,19 126:4,7,11,20,23 127:3 130:12,17 municipals 129:18 mvp 280:9	173:14 178:17,18 national 136:12 171:11 nature 27:17 63:24 156:19 167:4 170:2 175:1 182:4 247:9 280:14 natyksho 171:15 necessarily 281:22 necessary 101:13 122:14 126:8 223:23 need 24:3 31:2 60:6 83:6 112:4 141:9 150:10 155:13 159:17 166:15,17,20,23 170:4 179:24 181:16,24,24 182:11 200:2,11 200:15 201:14,20 207:9,22 215:3 216:24 217:9,10 217:11 229:10 239:9 242:4 245:23 248:8,17 248:18 256:1 276:16 278:6 281:13 needed 16:7 18:9 28:6 31:14 76:15 79:16 80:15 196:3 201:25 205:18 218:20 254:10 260:17 264:16 270:19,25 271:13 needing 271:8 281:8 needs 14:4 21:5,6 40:21 130:17	141:7 166:21 186:21 neither 175:18 network 12:22 14:8 15:15 68:19 70:14 78:15,23 79:4 112:6,12,13 144:9,9,24 146:12 150:17 195:22 243:15 252:10,11 252:14,17 253:7 253:13 254:22 256:6 257:6,11,14 257:23,23 258:5,5 258:21 284:16,17 networked 9:18 12:9 13:16 35:15 144:13 netyksho 5:12 171:19 never 24:19 78:13 82:9 90:17,17 95:11 136:1 188:1 191:17 232:13 247:5,8,15 257:8 267:24 new 66:16 92:18 115:4 116:1,7 157:13,16 158:25 160:1,4,5,5 161:19 161:24 162:9 211:20 230:15 236:16 237:2,5,25 238:1 246:23 251:20,25 254:6,8 259:24 260:2,9,17 260:19,19 267:3 277:13,17 283:4 newer 89:3,5 215:4 266:25
	n		
	n 171:15 n.e. 2:5 n.w. 1:18 2:13 name 8:3,5 10:7 33:19 34:1 36:8 36:16 46:23 59:25 60:1 63:14 64:24 65:20,20 72:16 91:24,24 108:4 119:18 143:12 151:11 153:23 155:22 157:14 160:5 162:5,6 196:3 204:13,15 210:12 215:6,7 230:1 232:9 240:22 259:10,15 266:23 names 35:8 51:18 75:24 92:2 157:3 157:7 159:5		

[night - office]

night 58:21 132:12 132:17 169:10 184:20 218:11 219:17 223:18 229:8,25 230:5 231:5,17 nine 206:4 ninth 23:9 nomenclature 10:5 nomenclatures 9:21 nondisclosure 128:17,19 129:13 nonemployee 34:4 nonpartisan 227:2 normal 9:17 50:13 124:19,22 normally 17:19,21 24:9 92:14 205:10 206:8 208:7 213:5 217:7 225:14 229:2 236:15 237:4 238:16 north 138:22 northern 1:2 notary 7:23 287:18 notated 183:10 notations 31:13 notes 193:9,9 notice 83:5 85:21 88:25 notification 83:9 83:18 84:5 86:1,2 86:23 87:1 167:13 notifications 31:5 31:9 notified 29:2 73:1 102:3	notify 18:2 156:15 notifying 159:22 november 128:2 193:19,24 281:20 number 11:17,18 21:25 38:11 40:1 40:8 48:25 50:14 90:10 94:12,13,15 94:18 96:7 97:18 97:21 98:8 102:5 102:19 103:5,12 103:24 105:1,17 105:18,19 106:17 107:16 119:2 121:12,17 122:3,5 122:5,12 123:8,19 124:12,12 128:1,2 131:23 142:21 153:6 158:5 185:4 185:4 200:18,18 204:17,25 205:1 206:9 211:1,3 218:1,2,4 222:4 223:8 250:3,16 271:24 283:4 numbered 140:23 numbering 37:23 206:1 numbers 48:22,24 98:4 104:24 105:2 105:10,14 121:16 122:19,21,22,24 122:25 123:1,2,2 124:9 132:16,18 142:3 181:6 205:5 210:20 282:25 283:6 numeric 94:6,8,11 100:11,12,18 102:13	numerical 164:25 numerous 118:13 nuts 203:25 215:12 228:20 243:4,20 o o 171:15 o'clock 72:23 223:18 oak 93:11 oakland 266:11,13 oath 227:4 object 117:3 139:16 259:22 278:2 obligated 125:17 observed 175:11 obtain 126:3 208:17 258:14 280:1 obtained 133:23 133:24 280:2 obtains 246:2 occasion 88:10 257:13,21 258:3 occur 109:3 241:14 occurred 268:4 occurs 188:24 october 44:12 172:3 odd 128:2 offhand 119:2 office 3:12 6:5 8:9 8:13,14,18 11:8,17 13:22 14:21,24 16:20 20:8,9 21:2 22:3 28:16,22,22 31:20 34:23 35:8 43:5 54:19 55:7 56:15,23 59:1	79:12 101:4 102:3 116:8,9 117:1,9,16 118:2,22 119:18 125:4,6,11 127:8 127:12,14 129:8,9 130:14 131:11 132:6 133:23 140:22 141:3,8 146:17,23 148:4 150:24 154:2 157:20 158:4,7 161:20 163:2 164:18 166:10,12 166:14,25 167:9 167:13 172:19 173:1,13 176:18 177:18 178:13,19 178:22 179:17,20 180:7,17 181:4 182:2,9 183:24 185:2 188:15 189:2 190:25 195:2,7 197:25 198:5,13,17,24 207:5,19 208:4,8 208:11 212:3 217:23 218:10,12 218:13 219:18 221:17 223:16 224:25 226:2 227:19 231:15,24 232:7 233:8,10,15 233:17 234:4,5,9 234:11,12,14,18 236:9,11 237:17 237:22,25 239:15 240:10,16,18 241:9,11,17,19,22 242:10,20,24 243:13 247:1,12 247:23 248:5
--	---	--	---

[office - operational]

251:21 254:4	45:8,12,20,23 46:2	186:5 187:2	ongoing 42:10
259:11,16 260:13	47:2 49:3,8,10,19	189:11 201:13,19	128:25 182:1
260:25 261:3,18	51:14 52:5,20	202:13 203:19	190:15 195:1
262:4 266:4	53:12,19 54:4,16	209:8 215:10	198:20 210:25
268:11,12,14	55:16 56:2,10	218:16 219:15	217:24
280:2,24 281:3,10	57:15 58:2,15,20	220:17 226:20	onsite 131:10
281:11,15 282:10	60:24 61:7,16	228:24 232:14	184:19
282:12 283:7,22	63:5 64:6 66:10	243:4 244:17,17	open 14:10 15:15
284:19	66:24 67:1,9,17,20	245:25 250:21	15:16 16:22 40:20
office's 172:24	69:11,18 70:7,17	251:9,17 274:19	44:16,20 109:18
officer 212:16	71:23 74:12,13	278:24	121:8 124:18,20
228:9	75:2,6,20 77:3,7	older 214:25	148:11 197:16
officers 216:17	77:18,19,24 78:20	oldest 213:24,25	203:3,4,12 204:16
218:14	79:18,20 80:2,8	onboard 209:19	223:19
offices 114:23	81:10 82:3,10	236:17	opened 101:20
official 106:9	83:1,25 84:21	once 12:25 14:15	123:24 190:22
148:1 168:22	86:21 87:11,14,24	14:19 15:7 16:12	264:9
176:9 184:16,22	88:16 89:17 90:2	16:19 17:18 18:21	opening 121:16
227:9 228:15	92:23 93:15 96:3	21:16,24 29:2	122:19,24 216:13
236:15 238:4	96:9,18 97:24	63:21 65:24	216:14 217:10
286:9,17	98:25 103:4,20	113:16 114:5	219:4,25 220:1
officials 9:7,21	104:2,7 107:15	117:25 122:6	operate 168:18
125:7 147:6	108:12,15 109:24	131:2,6,12 141:14	operated 156:5
219:24 236:16,17	110:5,23,24	154:24 155:12,13	operates 54:9
237:5 238:6 241:5	112:21 114:24	161:4 163:13	165:3
241:17 242:11	115:11,20,24	164:10 180:12	operating 12:21
281:25 284:22	116:3,10 118:5	204:8 205:19	20:4 254:16
285:20	120:11,16 123:6	206:5 207:7,25	261:17,19,21,22
offline 70:6,9	123:13 125:1	210:21 211:7	262:1 264:23
oglethorpe 128:9	128:4 129:4,12	215:15,25 216:10	operation 19:25
oh 31:3 69:2	131:17 136:13	217:14,16 218:6	90:20 102:10
207:21	138:11 139:3,10	220:5,25 223:22	103:9 118:21
ohio 267:16	139:12 140:11	225:8,10 228:22	152:25 158:12
okay 9:10,16 11:2	142:17,21,24	229:18 238:16,17	166:12 183:13
13:9,18 24:21	143:16,24 144:13	244:23 250:22	204:9 207:4 224:9
25:14 26:1,4	144:15 145:17,22	264:16 271:18	245:12 266:19
27:21 32:1 33:10	146:6,10,14,15	284:4,9 285:25	operational 59:13
33:16 36:17 37:18	148:5 151:10	ones 92:13 128:8	62:3 114:1 137:25
38:23 39:6,7 41:2	153:3,23 154:14	165:1,4 187:17	149:1 162:19
41:5,21 42:19,25	161:17 165:20	210:18 231:1	180:9 181:24
43:17 44:21 45:4	174:10 185:9	256:15	189:7 256:20

[operationally - participating]

operationally 170:16 operations 9:3,4 31:25 33:5,14 60:20 62:20 158:10 164:12 172:25 175:19 177:22 183:8 184:20 207:25 210:10 217:9 225:4 234:22 254:2 270:20,25 opinion 84:23 opinions 158:14 opportunities 240:6 242:9 opportunity 28:12 184:14 242:2 267:1 opposed 63:4 176:13 206:1 optic 275:21 277:1 277:2 optical 16:24,24 26:6,7,24 27:6 91:25 131:8 137:17 163:16,20 177:2 189:2,3,4,7 189:9,16 205:9,16 205:17 206:22 207:1 208:7,11 210:13,22 214:18 214:24 219:22 220:4,8,9,10,24,24 221:1,9 222:4 244:3,7,13,19,23 245:15 246:15 247:3,6,8,10,14,20 247:24 248:3,17 248:19,24 250:11 251:6	option 95:2 102:21 216:2 278:16 options 91:14 oral 195:13 order 4:15 15:6 27:7 38:4,9 40:7 40:14,16 54:9 85:4 87:15 127:19 150:1,1 182:13 200:3,3,10 201:15 201:21 205:7 213:25 217:11 219:18 228:6 248:18 256:5 ordered 248:2 ordering 227:24 organization 75:4 239:5 241:3,4,7 259:9 organize 222:1 249:12 250:19 organized 75:5 organizes 79:3 organizing 249:8 originally 68:1 85:6,13 165:17 209:1 260:3 outcome 201:9 288:15 outdated 68:23 outer 219:25 outline 17:2 168:19 outlined 23:25 26:15 170:9 225:20 outlines 39:19 40:1,4,8 106:18,19 140:25 205:20 output 73:25 203:5 244:12	outside 9:18 14:9 68:20 111:20 123:4 243:24 253:10,10 outstanding 219:13 outward 78:14 84:8 overall 112:23 oversaw 9:3 overseeing 169:15 overview 9:8 owners 128:15 <p style="text-align:center">p</p> p 2:3,4 3:3 10:18 10:19 p.m. 72:24 95:15 95:19 104:9,12 139:5,8 143:4,7 202:4,7 218:25 251:12,15 274:20 274:23 286:22,25 packaged 19:10 packet 17:18 156:14 218:22 padlocked 124:16 page 4:5,11 5:3,8 6:3 38:7,12 44:5 44:10,12,23,25 45:4,8,23,24 46:22 53:7,8 57:8,9 61:17 66:2,14 67:22 74:13 77:3 77:19 79:5,7,9 80:17,18,24 85:2 89:17,23 97:15,24 104:20 105:7 110:24 112:2 135:11,22 172:1 174:9 196:2,6 244:22 280:6	pages 1:25 44:5 84:21 91:4 207:15 panel 279:10,16 paper 73:17 74:10 125:21 137:7 169:24 192:24 220:19,22 227:11 227:13,14 243:21 244:1,3,5,14,18 246:12,15 248:2 paperwork 147:15 168:21 169:9 177:5 183:17,19 183:20,22 paragraph 46:2 53:6,9 57:18 58:3 76:17 171:24 172:1,2 parallel 133:22 134:6 park 128:6,7 130:19 parkwood 3:4 part 29:19 68:3 82:1 99:17 106:17 121:9 188:21 191:13 193:17 218:5 222:12 226:5 228:9,14 236:15,19 247:11 276:13 278:7 281:23 286:7 participant 99:12 participants 239:17 participate 238:8 241:10 participated 21:23 141:1 227:10 participating 98:19 161:5,9,13
--	---	---	---

[particular - pin]

<p>particular 9:23 10:8 23:5 41:10 43:14 46:22 47:25 50:23 68:6 75:25 80:25 89:7 91:9 93:21,22,24 94:22 103:25 158:8 183:7 194:18 230:15,16 272:6 particularly 81:14 174:8 parties 51:17 288:13 partition 272:4,6 272:11 partitioned 271:21 272:2,8 parts 179:17,19 party 6:8 122:14 127:5 198:2,8,10 pass 272:25 passcode 63:12 215:22 279:25 280:1 282:9 284:3 284:3,19 passcodes 282:15 282:17,18,18 283:8,17,21,23 284:7 passed 102:2 184:3,6,7 246:24 passes 29:9 password 33:19 34:1 46:23 52:12 63:14 64:24 65:21 151:12 152:1,15 153:1,7 155:22 157:14 160:5 231:25 256:4 passwords 46:14 51:18 52:6 63:17</p>	<p>151:14 152:5,9,11 152:22,23 154:5,7 157:4,8 159:5 160:1,1 patch 57:20,24 patches 168:4 263:10,15,17 patching 58:5 patience 208:15 pattern 134:2 pc 11:3 258:20,22 pcmcia 208:22 pcs 53:10,13 153:18 pcu 258:24 pdf 16:23 17:1,8 19:2 23:4 31:14 40:22 63:20 77:15 186:24 257:16 258:4 pdfs 25:24 26:4,5 26:21,21 30:25 36:18,22 39:6 52:6 63:6,11 145:4,4,7 peachtree 128:7 130:19 penalty 287:1 pending 190:4 penetrate 123:7 penetrated 60:15 people 11:19 19:21,24 24:23 32:7 35:11 36:10 50:6,9 58:11,12 59:8 61:4 62:4 99:15 110:10 111:1 135:8 140:3 149:19,25 151:5 158:1 166:25 173:3 179:3,6</p>	<p>222:23 234:13 people's 33:25 248:13 percentages 210:21 perform 14:24 163:16 168:14 243:12 performed 163:13 232:25 242:24 264:21 performing 234:23 performs 280:25 period 101:15 134:4 142:5 180:20 188:15 224:3 225:12,23 periodically 29:19 148:24 219:16 224:24 perjury 287:1 permanent 13:24 205:13 permitted 234:11 person 15:8 76:16 90:19 98:25 99:25 100:5 101:16 108:3 201:8 236:6 236:8,23,25 237:19 239:13 245:14 277:25 personal 96:10 109:13,18 110:1,6 110:7,10 142:17 142:20 145:3,20 145:21 199:7,12 personally 47:14 48:15 pertaining 108:22 172:14</p>	<p>peruse 171:23 petition 199:4 phase 27:20 285:16 phenomenon 135:13 phone 13:25 18:5 18:6 142:18,19,20 142:21 243:18 photo 124:10 photograph 5:11 123:16 php 68:23,25 69:3 phrase 168:20 phrased 217:6 physical 19:10 22:2,8 27:3 34:15 39:4 40:5 43:10 63:3 81:22 115:18 140:10 146:16,21 146:25 147:2 176:12 177:17 178:3 179:19 181:9 220:22 228:25 235:6,10 physically 25:23 37:16 197:7 212:7 212:9 214:20 pick 65:20 picture 82:19,20 87:12 88:6 124:23 167:5 piece 62:3 103:20 139:2 220:22 pieces 71:20 109:17 110:9 136:6 pii 154:17,21 pilot 267:25 pin 268:25</p>
--	---	---	--

[place - possibly]

<p>place 15:3,4 16:3,7 18:7 21:23 28:8 34:22 54:7 71:13 103:10 113:15 123:10,11,11 124:2,7 148:13 154:23 164:1 178:12,15 186:19 197:8 203:13 208:12 224:7 233:6 235:13 243:21 246:23 247:16 256:17</p> <p>placed 14:19,20 15:11,11,19,23 17:8,10 22:9 23:21 52:25 65:13 76:11 78:14 97:9 100:12,15 103:7 110:14 113:23 114:7 120:8 121:13 122:6,21 134:6 142:3,7 146:3,21 152:22 164:4,9 169:4 203:14 206:6,7,21 206:22 214:16,17 217:18 225:14,15 228:5,6 229:16 245:18,19 258:14 264:11</p> <p>places 153:6 229:20 267:18</p> <p>plain 123:19</p> <p>plaintiff's 5:3 6:3 37:22 84:24</p> <p>plaintiffs 1:5 2:2 2:10,19 4:11 7:11 7:13,15 38:1 43:22 88:19 90:25 93:1 96:21 105:7</p>	<p>120:19 123:15 143:13 171:19 174:2 194:3 197:24 275:4</p> <p>planning 269:22 270:2 277:12,16 277:21</p> <p>plans 172:24 204:23</p> <p>play 92:2 231:18 234:18</p> <p>please 7:7 8:3 44:15 143:22 199:23</p> <p>plug 146:8</p> <p>plugged 145:9 188:1 252:10 253:13</p> <p>plus 68:24 221:8</p> <p>point 13:20 14:14 16:15 18:19 38:13 59:1 60:16 62:13 66:20 78:8 92:16 92:18 111:6 143:1 157:1 158:11 169:3 177:19 179:21 180:19 197:3,7,20 230:13 237:22 240:8 252:16 253:21,24 269:12 276:25 279:17 284:10 286:12</p> <p>points 181:14 235:3 253:11 286:10</p> <p>policy 268:15</p> <p>political 41:13 92:7</p> <p>poll 9:5 10:20,20 20:5 50:9 52:12</p>	<p>53:1,9,12,16,21,23 54:6,9,15 73:24 76:4,9,11,14 77:2 98:18 99:11 101:4 102:8,11 103:16 103:18,20,23 106:13 110:14 113:10,11,17,24 114:2,10,13 121:7 121:15 125:8 137:22,25 138:1,2 141:25 162:6 168:21 169:9 170:13 177:2,14 177:14,15 178:2,7 182:22 187:3 204:11 212:16 215:17 216:2,10 217:5,19 218:3,7,8 218:8,14 224:14 226:12,25 228:9,9 232:25 237:20 254:10 266:20 268:8 279:22 280:3</p> <p>polldata.db3 48:1</p> <p>polling 15:4 19:25 20:8 21:20 26:16 26:17 54:6 92:8 103:11 113:14 121:4,6 122:1 123:22 137:15 139:20 156:21 204:14,14,15,16 205:3,4,24 208:3,3 208:3,6,12 215:15 215:16,18 216:16 217:2,21 222:16 223:25 226:23 227:10 228:10 245:17,21 247:7</p>	<p>247:16 248:22 249:9,13,22,23,25 250:5 280:13</p> <p>polls 20:1,3 101:11 101:20 102:2 122:12 124:18,18 124:19 141:20 142:10 197:6 217:13 219:1</p> <p>poor 51:17,24,24</p> <p>pop 28:18 128:8</p> <p>populate 136:15 178:2</p> <p>populated 136:16</p> <p>portioned 276:14</p> <p>position 8:7 35:24 37:15 44:18 59:20 96:8 200:2,11,14 201:13,14,16,17 201:20,21 229:23 268:8</p> <p>positioned 200:16</p> <p>possess 182:2</p> <p>possessing 183:18</p> <p>possession 79:23 79:25 80:4,11 81:11,13,22 84:10 111:4,5,9,18 180:17 211:8 218:18 226:3 228:16 261:2 269:12 271:15 284:10</p> <p>possessions 182:10</p> <p>possibility 285:12 285:13,18</p> <p>possible 49:20,24 154:10 173:9 237:24</p> <p>possibly 60:6 201:11</p>
--	---	--	--

[post - probable]

<p>post 52:11 62:24 124:21 132:19 133:12 140:24 145:15 169:7 170:1 178:8 206:16 226:7 228:10,20 246:18 246:20 253:8 262:22</p> <p>posted 51:7 65:15 66:1,3 154:25 192:1 217:21</p> <p>posting 156:9 191:20</p> <p>potential 131:20 161:10</p> <p>potentially 24:9 123:9,12 126:9 129:14</p> <p>power 10:20 215:2 215:3 217:16 223:14,19</p> <p>powered 217:17</p> <p>powerpoint 156:2 239:25 240:2,12</p> <p>powerpoints 239:16</p> <p>practice 225:19</p> <p>pre 169:25 226:9 262:22</p> <p>preceding 92:15 223:6</p> <p>precinct 21:22 26:12 40:3,6 41:11,11,23 42:1,3 43:3,4 93:10 105:1,18 134:17 134:18,22 140:9 147:18,18,24 168:25 221:20 222:13,14,19,21</p>	<p>227:15 249:17,21 250:1,11,11,20,21 250:22 251:5 276:1,2,3,4,6,6,8 276:10,11,11,13 276:14,16,19,21 279:21</p> <p>precinct's 245:21</p> <p>precincts 15:3 17:3,5 26:11,16,18 39:20,22,25 40:1,3 40:4 43:6 50:15 92:8 134:2,16 139:21,24 221:4,6 221:9,9,11,13,15 221:22 249:24 250:4,7,16 275:21 276:5 277:6</p> <p>preexisting 116:20</p> <p>preliminary 199:19 251:18</p> <p>preparation 197:10 226:11 243:24</p> <p>prepare 126:8 281:8</p> <p>prepared 169:20</p> <p>prepares 38:15</p> <p>preparing 107:24 125:7 135:16 184:12 227:20 243:21</p> <p>presence 69:22</p> <p>present 3:18 47:19 54:25 74:24,25 75:18 96:16 132:24 133:2,13 135:18,19,20 190:23 226:24 234:17 241:24</p>	<p>presentation 235:7 239:25 240:2,12,24</p> <p>presentations 156:2,3</p> <p>presented 99:10</p> <p>presidential 62:10 62:14</p> <p>press 6:4 109:21 189:22,25 197:24 198:5,12 199:6,15 286:13</p> <p>pretty 137:20 204:2</p> <p>prevent 33:17</p> <p>previous 38:25 81:5 92:16,21 133:21 240:11 256:21</p> <p>previously 36:10 67:14 108:13 118:24 194:17 250:13 260:6 273:19</p> <p>price 274:9,11</p> <p>primarily 62:8</p> <p>primary 106:21 108:4 227:1</p> <p>prime 62:12</p> <p>primer 75:11</p> <p>print 18:24,24 19:1,2,5 23:7 138:13 152:13 154:4 156:12 212:19 216:19,20 219:2 220:10 223:11 286:1</p> <p>printed 20:2 21:18 43:3,5 136:8 152:18 209:11 213:6 216:12,13</p>	<p>216:18 220:14 239:17 262:21</p> <p>printelect 138:21</p> <p>printer 19:6 40:17 138:16,22 209:19</p> <p>printers 18:25 19:3 138:17,21,24</p> <p>printing 138:11,23 138:25 212:18 216:10,22 217:15 227:23 286:1</p> <p>printout 5:4 27:3 93:2,5 94:22</p> <p>prints 184:7 209:19,23,24 220:10</p> <p>prior 8:17 38:18 48:3,6 57:2,23 122:19,24 141:12 154:22 169:6 172:11 184:13 187:7 194:24 197:13 219:5 226:23,24 239:25 267:25 276:3</p> <p>pristine 120:7</p> <p>private 96:12 112:6,10 122:16 252:14,15,17 253:7,9 254:22 255:1,5,9 256:5 257:6,9,9,12,14,19 257:23 258:4,10 258:21 284:15,16 284:17</p> <p>privileges 17:12 63:15 155:21</p> <p>privy 194:25 195:8 198:15</p> <p>probable 285:18</p>
---	---	--	--

[probably - protect]

<p>probably 19:17 86:4 97:19 128:2 139:14 217:5 243:2</p> <p>probate 147:13,14</p> <p>problem 30:4 58:10 70:20 159:12 161:3,4 277:9</p> <p>problems 31:5 37:5</p> <p>procedure 96:5 124:19,22</p> <p>procedures 168:7 169:19 212:16 215:17 216:13 223:24 233:4</p> <p>proceed 218:11</p> <p>proceedings 286:25</p> <p>process 13:19 15:7 18:12 20:4 21:17 22:18,20 24:12,14 25:14,15 26:2 27:24 29:10 30:24 31:8 32:11 34:8 34:11,17 36:22 39:12 54:22 64:9 66:17 102:16,21 103:21 110:25 114:17 118:15,18 122:2 124:4 141:6 141:6,14,23 142:11,13 143:25 144:22 145:25 148:6,8,17 149:5 149:15 151:24 153:8,15 154:1 157:13,19 162:22 162:25 163:1,8,13 164:10,17,22,24</p>	<p>165:7,13 167:1,16 169:12 187:11,12 187:14,18 197:9 197:10 203:21,24 204:4 206:24 207:2,2,3 208:8 209:18 210:2 211:22,22 212:22 212:24 213:8 215:12 216:25 218:5,7 219:7,8,21 219:24 220:6,13 220:23,25 222:4 223:2,5 228:1 229:17,18 230:22 230:24 231:17,18 232:20 236:16 241:20 244:8 245:5,5 247:11 255:20 256:7 261:13 262:17 264:4,14,17 267:22 268:6 269:7,18 270:7 276:23 277:20,20 278:4 281:23,25 284:6 285:25 286:2</p> <p>processed 220:4 222:8 249:20</p> <p>processes 67:11 164:17 222:6 224:1 228:20 232:16 233:3 241:16 242:17,21 243:6,21 250:24 250:24,25 255:15 255:16,19</p> <p>processing 220:5 250:11</p>	<p>procured 191:15 209:1,2,5,7 222:17 246:7,9 259:25 274:4</p> <p>procurement 273:25 277:20</p> <p>procurements 273:24 274:3</p> <p>produce 16:22,23 17:1 43:2 97:9 152:13 163:15 219:18 229:5 244:5</p> <p>produced 20:7 40:22 44:20 132:11 175:7 196:20,20 211:21 216:25 239:15 248:11</p> <p>produces 10:19 27:1,1,9 216:5 262:20</p> <p>producing 40:24 132:19 244:11</p> <p>product 125:12 144:10</p> <p>production 62:9 186:14 197:10</p> <p>professor 78:3 110:19 119:19</p> <p>professorial 68:4</p> <p>program 14:10 26:15 46:4 67:8 113:9 115:4 116:2 117:7,13,14,23,25 118:4 130:4 146:4 148:9,11 153:22 153:23 161:25 162:2,3,5,16 165:2 165:3,4 197:5</p>	<p>203:12 204:10 209:10 260:22 262:23</p> <p>programmed 133:25</p> <p>programming 57:16 204:4</p> <p>programs 118:7 118:10</p> <p>progress 27:16 219:20</p> <p>project 267:25</p> <p>pronounced 75:23</p> <p>pronunciation 171:15</p> <p>proof 26:9 38:24 64:24 186:25</p> <p>proofed 38:17,19 65:1</p> <p>proofing 62:24</p> <p>proofs 16:17,20,23 18:1,24 23:2,3,4 26:13 62:23 63:3 63:5,20 131:3,4 144:16 156:9</p> <p>proper 15:6,23 16:6,14 128:23 131:7 235:12 264:21 281:24 284:4 285:6 286:12</p> <p>properly 16:4 24:18 163:22,24 169:23,24 170:12 237:11 250:6 282:1 284:22 286:10</p> <p>property 82:5 191:2</p> <p>protect 170:6 192:13,17</p>
---	--	--	---

[protected - random]

<p>protected 33:20 151:12 152:1 170:4 231:25 263:19</p> <p>protecting 124:3 192:23 193:4 236:1</p> <p>protection 111:23</p> <p>protects 177:7</p> <p>protocol 28:4 29:19 63:16 87:4 87:6,8 154:23 155:6,8,11 190:12 191:23</p> <p>protocols 60:14 149:7 168:7 172:24 237:13</p> <p>provide 39:4,18 40:3 46:23 127:7 138:15 166:17 235:25 237:16 238:8 280:3 284:12</p> <p>provided 15:2 38:22 109:22 131:4 189:5 191:14 215:8 229:14 230:6,10 230:11,16 236:20 237:17 239:17 246:3,5 261:7 263:22</p> <p>provides 217:19 235:24</p> <p>providing 270:24</p> <p>provisional 131:9 208:9 245:2,14,17 246:16 249:19</p> <p>provisioning 27:5</p> <p>pryor 3:13</p>	<p>public 7:23 46:4 145:13 169:1,2 186:25 219:19 223:8 252:11 253:13,17,19,21 254:23 255:1,5,9 255:23,25 256:3 257:10,10,11,19 257:23 258:5,11 258:24 272:14,15 273:3 287:18</p> <p>publicly 96:15</p> <p>pull 28:14 29:2 62:25 156:10,11 255:24</p> <p>pulling 63:11 64:7 255:25</p> <p>pulls 142:9</p> <p>purchase 191:13 272:21,21 273:22 273:23 277:14</p> <p>purchased 116:7 191:12 272:20 273:16,17,18,19 273:20 274:6</p> <p>purchases 273:21</p> <p>purchasing 277:18</p> <p>purgatory 100:23</p> <p>purpose 50:17 51:7 65:11 104:22 125:20 182:19 266:17</p> <p>purposes 17:14 62:24 73:24 121:7 135:3 156:6 186:13,13 187:3 189:4 250:9 271:14 280:22</p> <p>purposing 270:10 270:12</p>	<p>purview 176:23</p> <p>push 62:23</p> <p>pushing 28:13</p> <p>put 31:15 34:22 50:19 68:7,10 70:15 78:14 80:11 100:11 148:10 159:6 163:18 166:19 168:12 178:9 186:19 213:2 215:24 229:22 238:5 276:9</p> <p>puts 106:2 225:3</p> <p>putting 71:19 255:19 276:19,20 285:11</p> <p style="text-align: center;">q</p> <p>queries 91:14</p> <p>question 13:18 33:24 51:15 54:2 64:14 70:17,20,24 71:1 88:5 105:24 115:7 116:13 120:11 145:22 160:8,12 162:13 167:24,25 168:2,3 173:11 183:21 188:9,18,25 190:4 197:11 199:4 201:24 207:13,13 207:14 213:16 240:23 242:14 256:13 257:2 268:7 269:2 272:3 273:4 277:12,15</p> <p>questioning 61:8 213:21</p> <p>questions 9:9 13:7 22:13 34:8 72:7 73:2 76:1 104:23</p>	<p>105:6 116:17 143:15 194:15 208:14 213:14 242:7 275:4 279:2 279:4,8,11 280:5,7 280:23 282:3 286:20</p> <p>queue 167:2</p> <p>quick 46:3 274:17</p> <p>quickly 28:14 212:23 222:8</p> <p>quote 199:16</p> <p style="text-align: center;">r</p> <p>r 288:1</p> <p>race 27:10,11,12 27:13,14,14 41:25 42:15 76:1 97:11 97:13 98:4 131:16 131:21,24 132:9 133:1,8,9,13,15,16 134:5,9,14,20,24 134:25 135:1,1,9 135:18,20,21,24 136:16,17,21,22 147:21 210:11 216:9</p> <p>races 15:5 27:6,9 31:10 32:2 42:12 42:14 50:14 75:25 92:17 132:24 136:10,11,14 147:11,19 216:7 251:3</p> <p>raffensperger 1:7 4:13 38:2,9</p> <p>ran 12:14 42:13,15 187:12</p> <p>random 94:12,13 94:15,18 97:21 153:6 282:25</p>
--	---	---	--

[randomly - recorded]

<p>randomly 134:1,1 152:7,8 153:10 282:19 283:3,4 reach 59:24 82:23 82:25 reached 60:11 135:11 270:18 reaching 242:2 reaction 71:9 read 45:22 114:1 171:6,7,9,13 172:9 173:20 174:7,11 183:21 194:10 213:4 221:23,24 264:15 265:24 reader 108:25 114:8 286:5 readily 30:16 reading 16:9 85:6 140:6 219:14 readout 16:10 reads 148:19 172:2 203:4 262:15,23 ready 15:10,12 16:17,17,19 18:20 18:23 19:8 22:25 23:1,2,6,7,8,10,11 23:21,22 24:7 144:11,15 170:11 171:25 175:9 180:25 181:1 208:2 251:9 real 139:3 really 10:3 12:5 27:22 150:22 171:10 203:17,20 243:25 reason 46:18 47:4 47:17,21 48:13,18 49:5,7 51:4,21</p>	<p>53:25 68:24 86:21 181:7 265:8 282:23 reasonable 108:25 reasons 101:3 reassign 200:21 rebuild 160:3 276:17 recall 10:25 12:2 12:24 24:21 25:1 28:23 30:7,19 44:24 45:1 51:12 55:13,15 56:15 65:15 66:9,9 70:23,24,25 72:14 72:17 73:6,9 77:6 80:25 81:10,12 83:4,13,18 90:18 108:2 141:8 148:22,23 149:4 151:16,17,24 153:24 154:9,19 157:9,10,13,17,20 159:18,25 160:6 160:25 161:5,9,13 162:2,23 166:22 172:20 175:4 178:17 193:25 195:10,12,13,16 195:17,19 199:19 200:1,6,7 212:14 226:17,18 231:9 239:18,24,24 240:9 246:8 251:17 261:14,24 262:2 270:16 273:7 274:2 278:16,18 279:11 280:7 281:1 recalling 54:21</p>	<p>recap 5:10 21:22 120:20 121:4 147:24 168:25 receipt 183:8 receive 25:23 26:2 40:25 45:2 69:15 86:22 175:21,23 175:24 211:8 250:7 received 14:2 17:18 18:21 49:24 59:5 84:4 86:1,1 94:7 107:6 141:15 195:14 218:18 221:16 receiving 83:5 195:18 210:21 245:5 recertification 265:14 recess 72:3 95:17 104:11 139:7 143:6 202:6 251:14 274:22 recipient 190:21 recognize 106:16 163:21 282:24 286:6 recognized 283:1 283:3 recollection 51:6 55:1,8,22 56:5 64:1,2 65:23 66:15 67:25 68:15 69:20 71:15 78:13 85:20,25 150:7,9 151:8 152:12 153:1 154:6 192:15 245:16 260:8 273:15</p>	<p>recommendations 5:17 173:21 174:5 reconciliation 21:23 121:7 122:9 122:15 217:25 218:5 reconfigured 138:5 reconnected 159:24 record 5:9 7:8 8:3 14:19 18:8 20:21 21:4 22:8 31:2 33:22 37:22 38:7 55:12,14 56:12 72:2,5,18,22,24 73:8,16,17 88:9 90:23 91:3 95:16 95:20 97:4 98:19 100:13 103:23 104:4,10,13,18 106:10,13,14,18 106:22,25,25 120:19 121:25 122:3 139:6,9 140:22 143:5,8,11 146:21,25 147:2 153:3 181:7 183:24,25 184:4,5 192:19 193:8,17 194:7 201:19 202:5,8 213:24 227:9 228:15 251:13,16 265:24 274:21,24 278:21 278:24 280:15 286:24 288:10 recorded 96:14 106:22 133:20 218:3</p>
---	--	---	--

[recording - reporting]

recording 183:10 records 5:10 31:12 44:15,16,21 73:3 79:11 83:7 120:20 181:6 191:9 193:14,15 223:7 240:14,25 241:2,6 241:10 271:21,23 271:25 272:17 273:14 recover 213:9 recovered 132:15 recovery 213:8 red 93:11 124:20 redo 138:8 redundant 149:15 reelection 147:19 reese 36:16 refer 38:12 reference 44:13 67:23 252:3 referenced 9:22 10:2 27:5 67:14 247:15 referencing 193:21 referred 9:13 66:13 112:8 257:6 272:10 referring 54:3 67:12 133:4 145:17 282:13 reflect 77:20 reformat 230:22 reformats 229:17 reformatted 120:8 145:7 187:7 230:21 257:24 reformatting 187:10 230:18,24	refresher 237:8 regarding 161:10 173:9,22 280:23 regards 224:7 registered 280:20 registering 243:10 registers 41:9 registrar 219:23 registration 3:22 3:25 41:4,6 42:24 43:1,2 47:13 48:15 106:9,17 113:7 142:3 175:13 194:20,23 196:8,12 198:11 210:20,25 243:7,9 243:10,11 256:1 280:6,10,13,17,18 280:22 regular 179:17 regularly 182:10 regulations 224:2 reintroduce 180:14 related 17:5,6 122:17 132:4 158:2 166:3 241:18 242:11 243:15 247:2 281:5 288:12 relates 41:13 89:7 relating 68:8,25 92:9 relation 27:9 31:9 50:13 59:23 101:17 109:22 124:3 129:18 130:16 158:10 171:11 193:11 194:22 227:5 243:9 252:7	relationship 139:22 249:25 relay 59:19 relayed 55:2 87:7 release 6:4 109:21 197:24 198:5,12 199:7 released 109:25 relevant 267:8,21 268:2,5 relocated 68:5 rely 157:23 158:1 158:13 remain 114:12 178:25 remains 97:6 199:8 remember 28:19 30:17 81:15 132:8 190:20 259:4 266:23 274:6 275:17 remote 188:20,22 removable 181:19 185:7 186:5 187:20 189:8,12 189:15 removal 181:17 remove 54:24 55:4 121:20 123:10 212:22 216:11,22 217:17 221:17 259:20 removed 29:3 55:10 56:6,17 80:6 87:16 92:17 114:6,11 122:7 140:23 145:10 155:12 209:20,21 214:1 216:16 220:15 229:22	264:18 removes 213:24 removing 212:25 219:25 220:1 rename 266:6 repair 179:25 180:4,4,5 183:12 183:14 repairs 180:1 183:6 repeat 237:6 277:15 repeating 143:21 261:16 repeats 217:1 replaced 114:25 114:25 replicate 123:9 report 5:6 33:12 36:4,13 37:2 39:24,25 40:4,8,13 40:14,16,21 43:3,4 43:4,6,10 93:15,17 95:9,9,12 96:22,25 107:21 109:6 135:15 147:17,20 156:20 163:23 171:6,7,10,12 219:2 229:2,2 276:12 report.exe 53:2 reported 1:21 109:5 132:17 183:14 193:19 194:19 228:23,24 251:4 268:18 reporter 7:9 120:18 288:6 reporting 39:25 139:24 156:16 164:5 221:9,10,20
--	--	--	---

[reporting - right]

228:20 229:8 230:1 231:5,17 232:3,6 250:4,9 276:1,2,21 277:6 reports 17:1,7,14 18:1,14 20:1,11 21:18 26:14 36:9 38:21 39:1,11,17 40:18 131:3 132:13 147:16 156:9,10 193:9 219:19 228:25 243:11 257:17 262:21 286:1 repositioned 269:15 represent 44:18 105:11,12 143:12 199:18 representative 266:11 representatives 236:23 representing 7:10 7:12,14,17,19 reproduce 271:10 reproduced 107:20 republican 106:20 227:2 request 44:16,21 166:19 227:2 280:20 requested 246:12 requests 104:21 require 232:24 required 16:2 20:2 46:15 125:18 147:7 151:17 157:10 168:13 225:18 228:10	237:2,4 238:4 274:13 285:16 requirement 168:16 177:23 233:2 requires 285:1 researched 135:13 reset 159:4 reside 24:6,19 31:24 53:13 resided 23:17 29:1 73:23 253:7 residency 41:10 resident 135:6 resides 36:14 41:14 49:14 155:2 residing 16:25 126:16 144:12 258:22 resolve 71:16 159:12,20 resolved 159:22 160:2 161:3,4 resolving 160:23 resource 54:12,13 137:22 138:4,8,10 166:18 respect 54:4 59:8 118:1,10 124:6 145:22 162:13 167:25 168:3 172:24 188:11 240:23 269:2 270:7 responded 60:10 159:18 response 4:15 34:8 38:4,9 44:20 77:22 105:25 109:21 168:12 173:7 196:24	235:19 257:2 268:17 responsibilities 8:25 9:6 responsibility 166:3 281:16 responsible 24:23 60:22,25 176:4,12 176:15 177:18 179:21,25 198:25 242:10 246:11 248:4 responsive 44:16 114:2 rest 247:11 result 250:8 251:4 281:19 results 20:14 21:12 58:22 200:15 216:8,21 219:5,8 220:11 223:3,12 230:5 276:1,2,16 retain 14:13 83:6 86:2 102:22 103:23 178:8 retained 31:16 61:11,14 82:8 155:2 214:8 228:8 228:12 260:16 retired 157:15 retrievable 79:21 retrieve 79:11 retrieved 271:18 return 17:15 18:15 20:6 183:16 returned 101:19 180:13 183:11 217:22 218:10 219:23	returns 21:18 22:1 22:2,2,5,7 146:15 146:17,18 147:10 148:1 reuse 111:13,19 269:25 reused 225:23 257:22 reveal 165:13 revert 63:2 review 14:20,24 15:7,9 16:12 17:17,23 18:12,20 22:19,25 23:1,7,22 23:22 24:7,12,14 25:15,24 26:1 27:18,20 32:9,11 36:18,24 37:8 38:22,23 39:3,12 126:19 127:9,15 127:16 131:5 132:20 144:17 156:11 207:24,25 268:3 280:24 reviewed 15:20,21 15:22 18:13 38:20 45:17,20 56:16 81:25 82:1 131:2 132:12 156:13 reviewing 15:8 45:23 127:13 168:11 reviews 281:3 rfp 278:3,4 richard 65:19 rid 55:9,20 right 11:3 13:13 15:3,3,4,4,5 24:1 25:12 27:7,22 32:10 35:3 37:5 40:15 49:16 53:14
--	--	---	--

[right - science]

58:11 63:22 66:8 69:19 71:25 73:19 85:22 86:7 88:13 88:23 91:20 94:17 94:20 95:10 97:13 98:16,17 99:6,9 104:5 106:24 108:20 110:2,12 111:8,11 116:6,21 118:7 122:10 123:20,25 129:6 135:21 137:23 138:14,15,15 140:6 142:14 144:21,23 162:18 172:12 176:6 180:9 183:25 187:13 195:19 214:10 215:24 244:20 247:13 248:21 252:23 253:4 274:15 275:9,21 278:19 278:20 282:2 285:5,6,10 286:12 rights 2:12 17:12 risk 96:16 risks 233:5 road 2:5 robin 1:22 288:6 288:24 role 60:19 68:2 81:3 107:24,25 165:22 166:9,11 168:6,10 169:15 169:16 234:18 roll 157:16 169:24 rolls 230:4 ronnie 3:21 roof 139:13	room 32:24 33:1,6 149:17,23 150:1,2 150:5,7,20,21,23 150:24 151:7 179:1,4,13,14,15 179:16 182:21,24 183:1 236:24 rooms 181:10 ross 1:17 rough 36:23 127:19 roughly 35:10 round 225:4 routed 250:9 routinely 210:17 rpr 1:23 288:24 rule 192:23 rules 124:2,7 127:1,10 168:13 170:9 223:13 224:6 225:21 237:13 278:4 run 49:11 118:15 118:23 129:19 163:9 164:11 183:18 229:17 230:22 233:16 235:23 255:11,12 266:12 running 47:6 68:23 116:1 124:15 162:16 254:11,14 268:23 runs 196:2 russell 173:16 russian 5:14 174:2 174:17	s.w. 3:13 safeguarding 166:3 safety 170:22 sale 190:18,24 191:3 227:6 sam 35:22 sample 23:11,18 save 14:16 111:22 144:11 203:16 saved 11:10 14:22 35:14 145:5,8 153:21 154:10 203:16 206:19 213:10,11,11,12 213:18,19 226:1 229:11 261:9 saving 144:11 saw 69:6 78:15 281:19 saying 10:4 16:8 25:18 36:8 44:15 47:5 80:12 83:10 139:23 153:2 165:10 181:23 192:8 201:5 219:14 272:13 says 38:14 45:20 46:2,6,14 47:6,13 49:3 50:25 51:16 53:6,9,19 57:19 58:2,20 60:8 68:21 85:4 87:15 104:25 107:13 108:18 109:13 136:19 138:16 147:9 174:15 175:10 183:12 184:1,5 199:6 213:3 216:7 219:12 229:9	scaled 207:22 scan 16:24,24 26:6 26:7,24 27:6 58:21,24 61:8,10 78:16,18,20 91:25 131:8 137:17 163:16,20 177:2 205:9,16,17 206:22 207:1 208:11 210:13 214:18,24 219:22 220:4,8,9,10,24 221:9 244:3,7,13 244:19,23 245:15 246:15 247:3,6,8 247:10,21,24 248:3,17,19,24 250:12 277:2 scandisk 230:9 scanner 163:18,22 220:25 221:1,22 221:24 222:4,18 222:21 247:7,14 247:14,16,17 249:22 250:6,14 250:23,24,24 251:1,7 scanners 189:2,3,5 189:7,9,16 222:12 222:14,19 scanning 175:12 220:12 222:2,21 251:6 scans 62:17 208:7 210:23 275:21 schedule 48:4 scheduled 38:17 237:6 238:18 schedules 248:10 science 68:2 119:16
	s		
	s 36:8 171:15 232:11		

[scope - see]

scope 155:22 163:1 166:2 182:8 235:8 252:25 253:1 259:8 screen 15:18 20:25 21:1 27:19 92:1,4 94:4,5 100:15,23 104:24 105:3,13 135:25,25 136:7 136:15,16,21,24 137:11,18 156:18 163:25 180:2 205:8,11,21 206:18 207:3,16 209:12,15,17 210:13 211:10 213:3 215:2 216:19 217:1 248:23 262:16,19 262:21 264:9 282:23 283:2 285:2 286:5,10 screens 120:6 132:14 169:5 205:12 207:15,19 219:3 264:3 script 46:3 47:6 134:6 scytll 231:16 seal 121:12,17,19 121:19,20 122:5 122:19,21,25 123:1,2,2,3,4,8,9 123:10,11,19 124:6,9,20,21 169:5,5 223:15 sealed 22:9 124:14 146:22 169:6,7 197:8 208:2 217:8 225:15,25 226:10 245:19,20 246:1,4	seals 124:11 223:19 224:4 seb 124:2 127:1 168:13,13,15 225:20 second 23:1,24 27:11,14,16 37:19 44:2 85:2,6 95:14 133:16 135:20 172:1 175:10 196:7 205:25 216:21 secondary 87:17 87:22 secretary 4:12 6:4 8:8,13,14,17 21:9 22:3,7,10 25:9 28:15 31:19 34:23 35:7 36:4 37:15 38:2,8,15 64:8,10 64:11 65:4 81:6 116:8,8 117:8,16 118:2 125:2,4,5,10 126:19 127:6,8 128:16 129:7,9 130:3 131:11 132:2,6 133:23 140:21 141:3,8 146:17,23 148:3 157:19,23 158:4,6 161:19 163:2 164:17 166:14,25 170:9,19 172:19 172:23 173:1,13 175:12 176:8,18 177:18 178:13,19 178:22 179:20 180:7,16 182:2,9 182:12 185:2 189:1 190:25 191:3 195:1,7	197:25 198:5,12 198:16,24 199:15 207:4,19 211:17 212:3 224:24 226:2 227:19 229:25 231:4,15 231:23 232:3 233:7,10,15,17 235:21 236:9,11 236:23 238:7 239:15 240:10,16 240:18 241:8,9,11 241:16,19 242:10 242:20,23 248:5 251:21 254:3 259:11,15 260:12 260:24 261:2,18 262:4 266:3 268:10,12,14 281:5,9,11,12,15 283:7 section 97:5 231:23 241:22,22 243:12 secure 55:5 63:17 64:15 80:7 140:14 157:18,24 158:24 167:22 176:19 199:8 212:5 217:20 259:11 secured 64:8,13,17 114:22 224:3 secures 245:14 securing 245:6 security 5:21 33:16 48:24 60:9 60:22 61:1,3 79:21 80:5 81:8 96:16 119:17 122:17 158:2 159:3,4 160:10,17	168:3,6 170:22 173:22 175:22 176:13 181:13 190:8,10,12 191:23,23 192:2,7 193:14 194:5,9 196:15,25 197:1 197:12 233:5 234:10 235:7,10 235:22 238:10,12 238:13 245:10 263:10,14,16 see 21:22 22:23 24:8 26:7 40:18 45:4,8 46:7,16 47:15 51:2,19 52:1,5,7 54:23 55:9,17 57:10,12 57:19,21 58:2,8 60:12 68:21 69:1 69:2,13,18,21 76:3 76:6,17,20 77:2 79:13 80:23 84:25 85:9,17 87:20 89:1,8 90:2,5 93:9 93:10 94:23 96:9 96:12,14 108:16 109:14 117:1 119:24 124:9,11 132:9,21 133:18 136:8,9,18,20 167:1,6 169:1 172:7 174:14,18 175:10,14 179:5 182:14 183:19,19 189:18 192:10 193:12 198:8 199:9 203:11 207:3,6,7,7,8,9,18 207:20 211:11 231:3 244:17
---	---	---	--

[see - showed]

249:8 250:21 265:24,25 266:19 267:2,3 seeing 45:1 seen 54:11 88:22 95:11 107:19 136:1 207:1,5 select 40:21 216:4 227:1 selected 134:1,1 selecting 166:11 285:9 selection 97:10 selections 97:7 sell 274:16 senate 173:21 send 36:22 37:8 147:23 220:7 sends 180:3 sense 60:20 62:2 71:9 175:4 266:24 sensitive 46:16 96:12 sent 19:5 64:18 86:9 100:19 141:17 144:16 151:20 156:6 191:1 202:14,18 204:19 210:24 212:5 273:12 sentence 87:14 172:2 199:6 separate 145:12 234:6 252:11 277:24 september 66:14 84:22 199:20 251:19 sequence 18:23 94:16 206:1 212:17 285:6	sequential 228:6 serial 97:18 98:4 103:24 122:21,24 181:6 206:9 series 91:13 serve 8:9 served 9:1 104:21 server 9:16,17,19 9:20,23 10:2,4,6 10:15,16,17,19,23 10:23 14:18,22 15:9 16:16 18:18 19:7 28:3,13,23,25 29:1,4 30:13,21 33:2,3 35:5,14 37:13 45:21 46:5 46:12,13 47:20 49:21 51:8 52:19 55:3 56:2 60:18 62:23 63:1 65:21 65:24 66:16 67:5 67:12,18,23,24 68:1,3,7,16 70:6,9 70:11 72:19 73:4 74:1,4,7 75:8 77:21 78:1,6,13 80:5,8,9,10,16 81:19 82:3,5,7,14 82:16,23 84:8 85:15 87:2,18,19 87:22,25 110:14 112:18,19 113:1,1 113:2,5,6,17,18,20 113:21 115:9,14 115:17 116:12 119:21 142:16 144:3,7,11,12,25 145:1,2,3,5,8,18 146:3,11 147:17 148:13,21 149:1 150:5,7,14,17,21	153:21 155:3,4,20 155:21 161:17,18 161:19,24,25 162:6,10,14 163:7 163:23 164:6,7 186:7,11,14,20 187:22 205:11,18 229:16 252:19 253:5,6,7,12,12,17 253:19,21,24 254:4,5,20 257:7,8 257:9,15 258:11 258:14,18,19,24 260:5 262:1 269:10,11 270:8 270:10,11,13,14 271:3,6,12,19,22 272:1 273:3,8 serverelection.k... 68:22 servers 9:13 10:12 10:24 11:1 30:10 34:16 77:25 83:25 84:9 87:4 111:1,3 111:5,6,9,11,13,16 111:18,19 115:11 148:24 187:22 188:10 232:7 253:3 260:4,15 serves 40:23 services 82:11 session 239:7 240:1 sessions 236:21 238:9 set 9:5 14:11,12 17:1 27:12,22 41:3,5 48:1 64:8 91:22 110:14 114:13 141:17 152:7 155:14	169:23 178:1 220:6 221:25 247:16 250:15 281:24 282:1 283:11,11 284:22 285:3,7,16,19,24 288:9,16 sets 113:10 125:8 201:9 254:10 setting 92:4 204:20 247:6 285:1,23 setup 137:15 183:8 255:7 seven 120:17,18 seventh 23:8 shape 164:13 207:6 277:10 share 58:22 shared 186:17 sheer 185:4 sheet 17:15 18:15 138:16 156:11 168:25 183:12 sheets 21:22 31:13 147:24 sheldon 35:22 shift 43:17 165:20 ship 170:16 shipped 180:6 185:3,4,5 shipping 180:25 short 139:3 180:20 shorten 162:7 show 26:4 92:24 93:18 94:23 95:2 99:20 165:7 192:19 showed 20:3 66:2 134:4 271:23
---	---	---	--

[showing - speak]

showing 114:3 164:3,14 184:8 219:20	210:1 225:22 250:4 276:6,19,19	107:10,12 191:18 224:21,23 235:19	182:6 214:4 224:19 225:7,12 236:7 237:8 241:23 250:19 266:6 274:12 277:11,21
shown 16:13	sir 105:15 106:8 107:18 108:17	smartphones 187:24,25	sos 6:6 64:9,10,14 80:18,25 81:2 84:18,19,20 115:7 115:10 142:7,13 145:12,13,15 149:7,8 152:20,23 160:8,13,19 162:10,18 166:10 166:12,12,19,24 167:9,24 168:2,5 178:16 183:24 186:8,19 187:1 188:9,18 198:1,6 240:4 252:4 255:23 256:13,18 260:1,2 261:6,9,11
shows 27:10 68:22 97:7,10,15 141:25 220:11	109:15 110:22 112:20 115:1 120:15 121:2 122:11 130:6 131:25 142:19 279:19	sn 94:23,25 95:3,5 95:22 97:19	sos's 154:2
shut 77:20	site 77:9 159:2,3 224:12	snapshot 74:5,8	soup 203:25 215:11 228:19 243:4,20
shutting 77:24	sitting 18:18 59:11 115:4 119:8 123:18 186:18	social 48:23 49:1	source 215:2,3 264:24 265:2
side 61:3 85:4 255:23 256:6	situation 28:19 130:12 159:21 197:19 198:15,17 239:4	software 12:4,6,10 12:12 57:17 67:7 126:16 131:20 153:9 162:9 166:10,11,13,16 167:22 168:1 180:9 209:10 210:8 231:13 254:9,12,13,15 255:11,18 260:1,3 262:8,11 274:12	south 267:15 southeast 28:11 138:23 southwest 28:11
sided 43:20	situations 169:8 212:15	software's 231:18	space 27:15 213:25
sign 14:7,9 17:15 18:15,21 27:21 31:13 33:25 37:7 39:5 138:16 156:11 159:9 167:3 216:22 230:1	six 47:15 48:16 219:14 225:12 278:22,25	sold 190:21 192:11	spaces 114:19
signature 117:14 117:18 118:19,21 118:23 162:23,25 164:22 165:19 227:7 288:23	sixth 23:7	solely 205:14 247:24	speak 59:18,21 71:4 73:20 103:9 135:14 170:24 201:11 225:25 231:14 238:12 243:8,24,25 244:6
signed 18:15 63:21 101:22 147:12 216:14,16,22	size 207:12 213:22 214:10,11 221:2 276:11	somebody 129:23 130:24 133:9 278:13	
signing 25:18	sizes 92:2	soon 58:22	
signs 131:6 177:5	skill 201:9	sorry 44:1 57:9 64:12 69:2 77:8 130:1 217:3 261:16	
similar 87:18 100:19 118:9 259:9	slightly 249:1 255:22 286:13,14 286:15	sort 9:19 11:5 22:20,24 33:5,16 40:12,23 55:16 60:16 61:24 77:5 81:7 84:9 92:4,16 96:16 100:16,23 116:23 118:9,18 122:1,16 123:25 128:21 133:17 166:18 181:17	
simms 67:3	slot 257:11		
simple 46:4	slots 264:12		
simply 94:3 104:19,23,25 130:22 223:7	small 163:17 214:10		
single 41:25 42:15 43:20 91:19 113:22 114:10 142:6 202:17	smaller 182:17 259:8		
	smart 103:5,8,24 106:1,6,11 107:5,8		

[speak - state's]

245:8 252:4 256:19 259:14 266:22 285:10 speaking 58:13 110:3 143:25 190:14 202:25 284:13 speaks 87:23 special 148:15 specialized 53:10 53:13 specific 11:18 13:23 17:11 42:9 45:1 93:18,20 105:2 147:16 157:5 164:1 166:15 170:17,19 171:24 193:3,6 205:11 206:12 215:19 224:12 227:15 229:11,14 251:5 256:14 261:19 264:16 275:6 285:2 286:10 specifically 116:18 260:20 262:11 specify 124:5 speculation 117:5 139:17 259:23 spell 232:9 240:22 spent 239:20 spoke 112:10 230:22 272:12 spoken 244:9 spreadsheet 152:8 152:10,18 154:5 167:18 282:20 284:16 spring 65:5 239:6	sql 52:24 ss 288:3 stack 114:15 163:18 220:3 221:21 250:22,23 stacked 220:2 stacking 220:23 stacy 33:9 149:20 staff 15:13 150:19 151:2,6 179:7,10 179:11 234:14 238:1 242:2 272:10 staffing 277:11 staggered 225:9 stamp 272:24 stand 95:18,22 167:7 193:9 standard 124:22 165:8 standards 127:10 standpoint 163:11 235:22 stands 82:16 97:19 162:5 start 24:11,13 55:8 68:13 85:11 92:10 92:16 156:9 214:6 218:23 222:2 243:2 277:3 started 8:14 10:4 37:23 61:7 90:19 99:24 276:18,23 starting 57:19 starts 57:9 61:17 61:21 121:24 163:8 206:1 210:21 212:20 219:14 state 3:2 4:12,13 4:14 7:17,19 8:3	8:19,20 9:7 12:13 21:9,11,13,14 22:4 22:4,7,10 25:10 32:2 36:5 38:2,2,3 38:8,9,15,25 62:14 64:8,11 68:4 72:10 81:4,7 82:5 82:8 84:17,18 89:12 90:15,18 99:24 100:4,7,24 101:23,25 117:17 118:11,12,13,24 119:18 120:7 125:2 126:7,11,12 126:17,19,24,25 127:6,10 128:16 128:20,24 129:22 130:3 132:2 134:10 135:7 136:12 138:20 140:25 142:19,21 146:18,19 156:5 157:23 170:10,10 170:20 175:13 176:5,7,9,10 177:24 180:11 182:12 191:3,12 192:21,22 193:1,7 193:10,13 199:4 205:13 208:18 209:1,2 211:18,20 221:7 222:17 224:1,6 225:2,2 227:14 228:13,16 229:14 230:7 232:24 233:2,3 234:22 235:24,25 236:13,23 238:5,8 238:9 239:2,3,9,11 240:4,24 241:6,8 241:14 244:1,2,4	246:3,6 249:4 256:9 265:13,19 266:2,25 267:4,24 268:10,16 272:21 273:17,20,21,24 275:25 276:3,15 277:13,17,24 281:5,12 288:2,7 state's 6:5 8:9,13 8:14,18 22:3 28:16 31:19 34:23 35:8 37:15 46:11 65:4 116:8,9 117:9,16 118:2 125:4,6,10 127:8 128:21 129:8,9 131:11 132:6 133:23 140:22 141:3,8 146:17,23 148:3 157:19 158:4,7 161:19 163:2 164:18 166:14,25 172:19 172:23 173:1,13 176:18 177:18 178:13,19,22 179:20 180:7,17 182:2,9 185:2 189:2 190:25 193:23 194:23 195:1,7 197:25 198:5,11,13,17,24 207:5,19 212:3 222:13 224:25 226:2 227:19 229:7,25 230:4 231:4,15,23 232:3 233:8,10,15,17 235:22 236:9,11 236:15 239:15 240:10,16,18
--	---	--	---

[state's - supposed]

241:9,11,17,19 242:10,20,23 243:11 248:5 251:21 254:4 259:11,16 260:12 260:24 261:3,18 262:4 266:4 268:11,12,14,18 280:9,18 281:10 281:11,15 283:7 stated 118:24 198:12 statement 46:19 47:18 49:6 51:5 109:25 147:17 155:24 200:7,9 states 1:1 53:24 69:22 135:3,4 171:14 174:16 175:11 230:3 265:5 267:21 stating 47:19 station 14:23 126:16 262:9,12 263:13 stations 150:12 status 280:14 statute 100:1 101:8,12,17,19 102:2 125:6 129:17 147:8 246:22,24 statutory 177:22 stay 179:1 208:6,7 stayed 82:6 84:3 100:23 stays 181:22,25 186:14 233:24 step 54:23 92:11 133:17 182:7 199:17 203:20,20	231:22 stepped 80:4 stepping 162:3 239:13 steps 54:21 162:18 167:21 169:19 244:6 269:14,24 steven 33:15 45:6 45:10 56:6 57:10 59:1 60:1,3 68:10 69:13 79:7 108:6 111:4 149:20 stick 139:22 stockbridge 128:6 stop 158:5 196:22 265:12 stopping 219:18 storage 11:5 12:23 12:25 13:5 80:7 213:24 214:14 232:16 258:10 store 20:15 34:2 152:10 stored 11:6 12:6,8 20:22 80:16 153:21 178:21,23 178:24 181:3,3,4,4 181:5,8,9 182:21 182:23,24 208:2 214:6 224:2 226:14,14 235:15 storing 13:4 straight 30:10 strata 24:17 street 1:18 2:13 3:13 strengthen 55:4 strengthening 56:7,9 string 75:12	stronger 63:1 struck 148:25 structure 34:13 183:10 186:21,22 200:17 203:15 235:1 262:14 structured 249:14 structures 186:23 structuring 248:7 stuck 94:18 studied 247:23 stuff 63:24 64:7 160:15 162:19 177:6,6 271:13 280:14 style 42:12,17 94:3 94:4 98:21 99:16 103:19 105:19,20 105:22,23 106:21 107:2 134:18 135:19 139:14,25 140:1,2,10 styles 15:25 26:10 26:19 27:2 39:23 40:5 76:14 91:23 100:6 103:13 132:25 133:3 sub 174:14 subdistricts 92:7 subfolders 23:15 subfolding 24:3 submit 280:21 subparagraph 38:14 subscribed 287:14 subsequent 69:17 273:23 subset 271:3 sued 83:6 sufficient 164:22	suggesting 86:17 suggestions 166:16 suite 2:14 3:5,13 summary 5:16 135:11,25 136:15 136:16,20,23 147:20 173:25 174:4,9,15 216:6 229:1 summer 3:11 superintendent 147:12 superior 85:13 supervision 176:23 184:16,21 281:12 supervisor 52:6 215:19,21 216:1 217:3,7,8,9,10 224:15,15,17,25 225:1,22 237:18 237:18 268:24 269:6 279:21,23 282:8,18 284:19 supervisors 237:25 238:1 supp 85:3 supplied 227:18 241:3 supplies 226:6,12 226:12 228:9 231:17 245:21 supply 180:15 227:18 support 79:12 184:12 supposed 63:8 124:3 155:12 192:22
--	---	---	--

[sure - tape]

<p>sure 13:21 16:1,1 16:2,8 24:1 29:20 32:10 54:25 58:11 60:14 62:13 73:15 78:16 105:25 113:25 124:5 127:25 128:22 133:10 139:2 141:13 143:19 151:2,3 152:21 158:24 169:23,23 170:11,15,25 171:3 185:11,12 187:8,16 188:12 191:19 192:19 193:1 194:16 202:3 203:24 226:5 236:1 237:10 242:3 244:21 250:5,25 256:24 260:10 264:21 278:7 283:1,18</p> <p>surprise 281:21,22</p> <p>surprised 154:17</p> <p>surrounding 278:4</p> <p>surroundings 256:21</p> <p>swear 7:9</p> <p>swipe 150:6</p> <p>switch 77:4 103:3 142:25</p> <p>switching 142:25 266:5</p> <p>sworn 7:22 287:14 288:9</p> <p>system 12:21 24:4 41:4,6 42:24 43:1 43:2,16 49:4,11 52:24 56:8,9,24</p>	<p>59:18 60:14,22,25 81:8 87:9 89:12 98:7,12 100:7 102:8,8,16 110:13 112:9,23 113:7 116:24 117:19 123:8 125:18,24 128:14,15,21 132:4 136:14 137:3 153:2 158:3 161:15 163:4,15 164:14 166:4,19 168:22 170:4,7,22 171:1,4 176:5,13 177:20 179:20 181:8 185:7 186:1 186:17,17 187:8 188:21 190:8 192:24 193:23 194:23 196:8,10 196:12 197:1,16 199:8 210:20 211:18 222:13,18 223:17 229:8 230:1,3,3 231:5,12 232:4,6 234:25 237:8,23 243:9,11 243:23,25 244:8 247:4,12 248:12 251:20 252:1,1,4,9 252:25 253:1,11 256:2,16,16,19,21 256:25 257:12 259:12,17,19 260:11,12 261:17 261:21,23 262:1,6 264:14 265:12 268:5 275:8 277:13,17 280:6 280:10,15,18</p>	<p>system's 17:10</p> <p>systems 4:20,23 8:10,12,19 17:16 25:5 31:25 32:8 36:14 46:10 61:3 68:6 83:21 84:17 88:20 91:1 111:20 158:24 174:16 181:23 238:14 254:16,22 260:9 264:1 265:5,15 268:9,18 283:10</p> <p style="text-align: center;">t</p> <p>t 171:15 232:11 288:1,1</p> <p>table 43:14 89:24 90:1 200:17 203:14</p> <p>tables 49:15</p> <p>tablets 188:5</p> <p>tabulate 164:7</p> <p>tabulated 223:3 228:22</p> <p>tabulating 215:12</p> <p>tabulation 20:17 20:18 21:9,10,11 21:13,14,17 219:20</p> <p>tag 102:25</p> <p>tagged 269:13</p> <p>take 14:2,21 18:5 18:17 19:6,13 43:11 59:23 70:8 71:23 72:25 79:15 91:15 95:13 104:7 138:12 139:1 167:18 178:15 186:2 187:4 190:5 194:10 203:7 215:21 228:16 236:17 247:23</p>	<p>249:11 274:17 279:22 281:5</p> <p>taken 72:3 73:3,9 73:16,22 77:20 78:17 80:6,10 88:6 95:17 104:11 108:16 111:5 114:14 139:7 143:6 145:12 159:14 167:21 202:6 229:24 251:14 259:11 271:18 274:22</p> <p>takes 21:23 27:8 104:20 122:11 164:25 178:12 214:12 225:12 226:2 233:17 262:13</p> <p>talk 185:6 235:6</p> <p>talked 146:15 160:22 161:17 162:22 185:10,15 185:22 203:19 231:9 249:15 250:13 271:5</p> <p>talking 76:23 77:25 99:2 147:1 154:15 157:18 174:25 236:25 252:18 260:21 277:19 284:4</p> <p>tally 21:19</p> <p>tampering 263:20</p> <p>tape 184:7 209:19 212:18 213:5 216:5,10,11,11,12 216:13,15,16,18 216:21 217:21 220:10,11 223:11 281:19</p>
--	--	---	---

[tapes - time]

tapes 20:7 21:19 217:15,21,22 220:14 223:24 targeted 174:16 175:11 targeting 5:14 174:2 task 147:4 269:20 tasks 21:25,25 168:13 tattnall 138:23 taylor 3:4 7:16,18 taylorench.com 3:7,8 team 218:8 254:8 264:10 technical 62:4 technically 101:5 technician 183:15 technology 64:11 266:24,25 267:4 tell 63:8 64:15 93:7 111:21 113:4 137:15 171:25 172:15 174:23 178:22 183:3 187:10 204:3 230:12 231:11 251:25 277:7 telling 124:17 tells 86:6 98:20 99:13,13,19 103:14 204:10 220:8 221:19 template 92:12 temporarily 79:20 ten 29:6 tenure 8:22 90:16 term 116:19 terminal 144:23 145:1 254:22,23	terminals 112:10 terminology 244:21 272:13 terms 65:9 74:5,14 terrance 36:16 test 119:4 121:13 134:2,6 163:7,18 163:21,22 164:2 206:24 264:19,20 282:25 283:18 tested 119:3 120:14 126:11 184:2,6 271:24 272:24,25 testified 7:23 73:2 95:21 98:6 200:1 251:19 275:20 testimony 98:9 199:18 288:11 testing 66:18 117:20 118:9 119:20,23,24 121:10,18 133:21 169:13,13,16,16 180:7,12 181:15 182:13,19 184:13 189:4 207:24 208:1 233:10 263:22,23 264:10 271:22,25 284:25 tests 133:22 169:22 text 15:24 61:21 136:23 140:24 210:11 229:6,8,19 255:25 thank 42:19 60:12 118:5 143:2 146:14 203:18 208:13 278:20	thereto 103:13 thing 23:17 35:1 44:8 86:9 115:2 121:24 130:7 146:2 164:11 171:23 173:25 174:8 194:16 205:16 229:16 271:20 282:21 285:5,10,24 things 19:17 44:3 70:4 113:8 143:18 143:20,21 156:5 167:20 170:1 182:4 202:11 203:17,23 224:16 253:25 273:12 think 22:23 33:4 41:22 44:2 46:24 46:25,25 49:16 60:1,10,11 73:10 83:15 100:1 128:5 138:23 153:25 170:6 179:22 184:24 186:10 187:21 189:6 193:3,6 202:1 203:19 204:1 211:6 215:11 231:7,10 232:11 241:20 242:12 253:3,15 257:3 267:13 271:20 274:9 277:7 285:4 285:17 286:18 third 23:2 27:11 51:17 57:18 127:5 216:25 253:12 thoroughly 192:6 204:2	thought 71:4,18 71:18,19 266:24 thoughts 71:21 thousands 78:25 threat 170:24 175:21,24 threaten 62:17,18 threats 170:3,7,17 170:19 171:2 three 11:1 13:23 24:23 25:4 32:4 35:19 36:10 91:24 220:14 252:21 253:3 254:18 ticketing 166:19 tie 124:15,16 tied 102:19 tight 17:22 170:16 tightening 60:13 time 7:5 9:9 14:14 17:22,23 18:19 24:22 25:5 28:2 30:17 31:6 33:7 34:9 36:7 45:3 47:24 48:12 49:23 54:21 58:19 59:1 59:2 62:7,13,22 65:13 70:19 71:8 71:22 72:1,4,23 73:4 74:7,15 75:1 75:9 78:12 81:1 81:23 83:14 84:4 86:16 94:3,14 95:15,19 100:2,10 101:10,15 104:9 104:12 108:13 109:6 117:20 118:16,22 120:2,6 121:13,18 123:23 127:17 137:2 139:5,8 141:17
---	---	---	--

[time - trick]

143:4,7 145:7	191:17 200:10	264:3,9 282:23	transfer 20:13
149:17 152:8,12	231:8 258:6	283:2 286:5,10,11	37:17 208:2
153:5 155:19	259:13 279:14	touched 155:17	209:13 233:20
156:24 160:22	today's 7:4	181:7 183:12	257:13 258:3,8
164:15 175:5	toggle 103:2	253:15 272:22	260:4,18
180:21,22 187:16	told 62:21 99:8	touches 177:12,13	transferred 20:22
189:24 190:5,20	136:25 139:12	177:14,15	21:8 208:4,5
191:15 195:2	195:10	touching 285:2	260:23 261:2,4,5
197:3,7,18 202:2,4	tom 261:12	track 22:20	263:25
202:7 207:2	tool 89:15 155:25	152:24	transferring 219:8
209:24 211:11	158:9	tracker 153:25	219:9 259:12,17
214:12 221:11	top 27:7 61:22	tracking 153:2,15	transition 31:21
222:6,7,11 224:3	85:9 100:18	train 50:8,9	169:25 275:19
230:16 231:7	184:24 268:3	241:17 247:13	transitioned 84:17
235:4 237:7,7,22	topics 189:21	trained 247:15	84:18 229:21
239:18 240:6,9	241:24	training 9:6 49:20	240:3 259:25
241:25 246:7	total 40:8 122:3,12	49:22 50:1,3,4,6	275:18
249:6 251:12,15	147:20 179:6	50:17 51:25 63:23	transitioning
253:21,23,24	211:1 214:13	64:25 65:11,13,15	212:21 251:20
255:4,6 258:1	218:4 219:10	66:2,5,7 72:12,16	transmission
259:5 263:7,15	273:24 278:21	156:2,6 234:19,21	64:13
266:4,13,23 267:1	totals 132:13	234:24 235:2,5,9	transmit 22:6
267:9 268:11	147:11 200:21	236:3,5,6,7,14,18	transmittal 283:24
269:12 272:20,22	216:7	236:19 237:3,15	transmitted 19:3
272:22 274:20,23	totenberg's 84:22	237:16 238:8	63:9 65:1,3
277:22 278:21	87:15	239:19,21 240:1	140:13 144:20
281:24 282:20	touch 15:18 20:25	240:17,20 242:9	283:22
283:9 284:10	21:1 92:1,4 94:4,5	242:11,19 247:5	transmitting
285:3,4,16,19,23	100:15,23 120:6	247:10,11 248:9	149:12
285:25 286:22	132:14 137:18	248:10 258:12,13	transpires 92:14
times 252:12	156:18 163:25	258:15,17,23	transport 206:16
271:24	169:4 176:17	259:2,4,7 271:9,14	208:3
title 33:4	177:14 180:2	273:13	transported 185:1
titled 5:19 194:4,8	205:8,11,12,20	trainings 236:13	185:19 208:12
198:6	206:18 207:3	238:3 239:13	256:3
today 31:25 34:12	209:11,15,17	241:13,15 247:2	transporting
34:20,22 35:18,21	210:13 211:10	trains 237:19	232:16
36:17,21 37:2,11	213:3 215:2	transaction	tree 57:21,24 58:4
72:8 82:23 112:11	216:18 217:1	106:13,14,18,22	tremendous 259:6
117:10,11,12	219:3 248:23	106:25 114:9	trick 199:25
143:22 149:6	262:16,19,21	140:22	

[tried - units]

<p>tried 151:2 158:16 191:17 283:5 trip 266:17 triplicate 147:25 147:25 216:23 trouble 58:5 true 51:5 109:16 199:14 249:11 251:23 287:3 288:10 trust 64:16 trusted 117:19 196:21 281:10 try 13:7 143:20 180:23 207:22 225:10 269:25 276:24 trying 33:4 41:22 59:25 90:18 108:2 108:2 111:13 199:25 200:15 201:8 235:25 259:4 285:4 turn 17:20 20:5 44:23 45:4,9 77:19 79:5 80:17 97:24 102:25 107:15 121:20 167:19 270:17 turned 184:1 197:5 264:13 turning 156:19 turnout 210:21 turns 223:9 tweeting 141:9 twenty 120:17,18 twice 106:23 213:11 238:20,24 two 15:20 27:2,2 27:12 32:7 44:3,5 74:19 77:25 105:2</p>	<p>105:10 111:1 113:8 115:11 136:12 139:12 177:15 187:22 189:6 205:25 207:15,15,19 209:2 217:22 224:16 225:7,23 228:24 244:16,24 254:24 255:4,7 273:12,21 275:4 type 74:25 106:18 115:6,10 116:6 119:23 214:23 244:11 254:13 266:24 277:8 types 77:11,12 158:14 166:21 182:8 185:11 202:16 214:20 230:7,7 typical 238:23 typically 214:5 typing 196:3 tyson 3:3 4:8 7:16 7:16 44:1,4,8 45:14 117:3 139:16 259:22 278:2 279:3,6 282:2 286:21</p>	<p>85:8,23 86:8 89:2 89:2 98:2,11 99:4 103:22 106:4 109:12 115:13 116:5 140:16 143:3 144:18 145:24 146:13,20 146:24,24 149:22 149:22 150:18 151:21 154:20 157:21,25 162:15 162:24 165:24 166:5,8 169:14,14 182:5,16 183:2 185:14,18,18,21 185:24 186:9 194:12 199:21 200:5 210:7 212:4 220:18 225:17,17 230:20 231:6 233:12 251:22 258:2 270:21,23 283:20 284:23 ultimately 60:24 228:12 umbrella 129:15 unauthorized 161:15 unaware 110:16 196:5 unbeknownst 159:5 unchecked 97:6,6 underneath 38:14 understand 70:7 70:18 131:23 143:19 165:22 166:2 185:11 190:6,6 199:24 202:12 203:24 250:8 260:10</p>	<p>267:5 understanding 13:18 47:24 57:23 64:18,19 66:21 81:16,18,21 83:3 87:8,10 94:16 111:12 148:5 164:21,24 165:15 200:23 203:10 222:3 228:1,4 250:10 262:12 265:22 280:11,19 understood 60:11 154:14 162:20 179:18 212:11 224:13 226:16 undertake 69:25 81:7 undertaken 132:3 173:8 undertook 196:25 197:12 unfortunately 38:11 unicoi 67:23,23,25 67:25 68:7,9,11,12 68:16 77:23 78:1 78:13 87:25 unique 103:5 107:8,10 unit 113:24 121:19 122:7 124:20 145:1,9 178:3 180:2 183:11 205:9,17 206:6,7 206:22 209:12 272:23 274:6 united 1:1 135:3,4 171:14 units 53:10,12,21 53:23 54:6 124:11</p>
	u		
	<p>u 36:8 uh 8:23 13:12 19:22 22:17 24:25 25:16,20,22 27:23 29:8,11 31:1 34:10 39:13 41:7 57:14 61:9,20,23 62:1 63:7 65:18 70:10 73:5,7,12 76:5,5,7,19 79:8</p>		

[units - verify]

124:13 131:8 177:2 181:9 214:18 universe 155:18 university 8:19 72:10 79:2 82:6,8 111:14 119:19 269:16 university's 85:15 unknown 97:16 unofficial 229:4 unreadable 206:17 212:13 uocava 23:12,18 upcoming 48:11 62:9 196:16 update 141:19,20 142:2,2,6,7 160:10 160:18 166:24 204:24 205:5 240:6,8 263:18 264:11 282:17 283:9 updated 18:11 59:15 67:5 140:17 141:8,9 212:2 240:3 263:7 264:15,16 275:18 280:15 updates 142:9 168:1 225:2 263:10,19,21 264:5 updating 141:11 239:25 243:7,10 upgrade 159:3,4 upload 20:16 185:25 186:25 218:24,25 219:7,8 219:18 230:2 231:21	uploaded 20:12 21:3 219:6 220:16 uploading 257:16 257:17 ups 185:5 usa 5:12 171:19 usable 50:17 283:5 usb 145:6,9,15 185:23 186:23 229:14,15,21,22 229:23 230:7,15 233:19,20 255:20 256:4 257:20,22 258:25 261:6 usbs 230:6 use 9:21,23 11:20 12:4,11 15:17 30:4 35:9,9 50:6 51:16 52:12 62:23 74:2 76:9 77:17 78:2 84:12 89:12 89:14,16 90:15 91:20 100:4,7 115:17 116:11,15 119:13 125:13,17 125:18,20,21,24 126:1,6,6,9,13,17 127:3,20,24 128:10 129:23 137:1,3,14,25 141:4 142:17 144:7 145:7 148:18 153:19 156:3,20,25 158:8 167:16 169:19 170:12 177:9,24 180:11,19 181:24 186:4 191:7 197:4 204:18,23 205:13 205:14 209:15 217:11 230:13	233:20,22 236:25 237:9,23 241:18 244:2,4,21,24,24 247:6,13 248:12 248:23,24 261:18 261:25 262:16,22 265:19 266:2,8,19 267:2,17,19,23 268:20 269:4,16 281:10 useful 268:2 user 17:12 33:19 34:1 46:23 51:18 58:7 63:14,21 64:24 65:20 100:9 151:11 155:22 157:3,7,14 159:4 160:5 229:5,9 230:1 243:8 285:9 user's 4:21,24 88:20,23 89:3,19 91:1,5,7 users 57:21,25 58:5 78:23 158:8 uses 158:9 177:4 utility 119:13	value 41:3,5,8,12 41:13,16,18 42:5 42:11,13,20,21 94:6,8,11 99:18,18 100:11,12,18 102:14 103:15 105:17 107:3 139:22 164:25 165:5,9 values 39:24 42:2 43:8 276:7 variables 91:10 various 13:2,8 17:2 19:3 29:6 40:2 42:17 43:8 76:13 193:11 204:11 211:2 217:15 219:12 238:10 vehicle 40:24 vendor 126:5,5,8,9 126:22,23,23 127:5,5,7,24 128:10,12,21 129:21 131:2,7,13 180:4,4,6 181:20 183:4,5,7,15 184:9 184:12,14,19,19 185:2 188:21,23 209:6,7 213:20 215:8 231:15,16 231:16 232:9 274:14,15 280:25 281:4,7,8,9 verification 74:16 118:15,18 284:13 verified 114:6 163:8 284:4 verify 69:22 119:14 121:8 164:11 197:1
		v	
		validate 14:25 16:6 21:21 60:4 117:17 121:9,17 121:21 126:25 156:13 163:10,19 164:3,11,13 206:25 219:4 252:14 286:4 validated 191:5 252:12 validating 162:25 validation 233:11 valley 128:8	

[version - want]

version 68:23 162:1 211:20 254:13,15,17 255:13,13 261:20 261:23,25 262:25 263:4,5,12,15,17 264:22 271:7 278:15 versions 180:10 227:15 240:11 275:18 versus 16:5 136:9 171:14 video 52:1,3 64:25 66:5,7 241:23 videographer 3:19 7:4 72:1,4,20,23 95:15,18 104:9,12 139:5,8 143:4,7 189:20 202:4,7 251:12,15 274:20 274:23 278:22 286:22 videos 63:23 66:2 236:4,6 videotaped 1:12 4:2 7:1,6 view 97:5 123:20 196:1 235:21 257:18 virus 200:2 visit 132:7 267:18 visited 118:13 172:4 267:15,18 visiting 119:1 visitors 234:11,12 237:6 visual 16:10 136:6 167:19 visually 15:21	vote 19:21 20:17 20:18 21:21 39:19 41:9 94:5 96:14 98:7 101:3,9 102:16,17 104:2,3 106:23 131:21 132:5 135:5 136:19 147:11 200:21 204:12 210:5,12,14 213:10 215:15 221:5 222:23 227:5 250:8 276:12,20,20,21 279:10,16 281:19 voted 19:24 97:16 102:1 105:13 106:19 134:2,3 138:6,6 141:16,21 215:16 voter 26:7 41:4,6,8 41:9,14 42:5,24 43:1,2 47:13 48:1 48:14 76:12,15 90:5,7,11 93:21,22 93:25 94:9,23,25 95:3,5,6,10,22 97:8,16 98:1,9,14 98:16,18,19,22 99:5,8,10,12,14,15 99:17,23 100:8,10 100:11,13,14 101:7,13,25 102:9 102:12,13,22 103:1,14,15,16,17 103:25 105:13,21 106:1,7,11,14,15 106:16,16,17,19 107:1 113:6,7 122:13 134:16 138:2,3,6 140:9,9	140:25 175:13 176:22 177:12,13 177:13,13,15,16 181:16 182:3 190:18,23 191:4,9 191:14,16 194:23 196:2,6,8,11 198:11 210:19,21 215:14,16 216:1 218:1 222:17 226:17,19,20,21 226:22,22,25 227:4,7,8,8,17,21 227:24 228:2 243:7,9,10,11 251:5 256:1 280:5 280:6,9,12,16,17 280:18,20 286:3,4 voter's 99:22 100:20 194:20 voters 16:7 21:22 47:15 48:16 90:3 122:13 134:10,13 140:24 170:12 176:16,20 177:9 211:1 218:2 243:10 262:18,19 266:20 votes 20:21 122:3 131:24 133:19 134:5 137:20 147:17,21 164:4 200:4,10 201:15 201:22 215:13 221:6 228:22 249:16 voting 5:9 9:22 15:18 17:3,4 28:10,21 39:20,21 43:7 76:16 90:19 98:1 100:5,9	101:9,16 117:19 120:12,20 121:4 121:12 124:4 125:3 128:21 130:22,23 134:1 134:13 137:1 139:20 141:19,23 142:5 169:11 170:22 176:4,16 176:19 184:10 185:7 188:21 190:8 192:13,18 192:23 193:5,23 200:2 208:4,5 215:18 235:14 238:14 243:23 266:10 268:20 273:21 vs 1:6 5:12 171:19 vulnerabilities 68:24 160:24 161:7,11 172:6 193:18,22 196:1 196:14,25 197:13 197:16 262:5 265:4,11,20 268:5 268:17 vulnerability 69:9 69:23 71:12 74:17 75:9 108:19 175:12 194:19 195:21 196:7 vulnerable 77:9 110:21 w wade 3:19 wait 70:20 98:16 120:24 196:22 walmart 26:8,8 want 9:8 54:8 72:25 73:15 84:24
---	---	--	--

[want - wrap]

91:20 104:3 125:22 138:13 143:17 166:23 185:11,12 189:22 189:24 203:23 211:11 212:19 215:11 220:3 239:2 266:1 278:5 278:7 279:7 wanted 18:6 19:4 82:22 100:4 199:2 202:9 239:1 267:23 wanting 269:20 warned 194:18 washington 2:15 water 245:23,24 watermark 26:8 watermarked 26:5 way 10:4 13:20 22:21 23:25 28:11 30:19 35:10,11 36:18,24 68:17 72:13 91:13 95:5 95:11 101:8 102:12 107:4 120:14 124:17 129:17 133:19 137:20 140:5,12 144:10 149:3 150:16 154:12 156:16,22 164:13 166:24 171:3 175:19 187:15 198:18 203:1,11 213:20 228:21 230:21 244:11 248:21 249:12,13 259:20 265:15 280:12,19 285:6	288:14 ways 9:12 15:21 63:3 66:17 185:3 185:11 228:25 244:5,25 web 9:19,20 10:16 10:23 28:3,13,22 28:24 29:1,4 30:13,21 46:12,13 51:7 52:19 55:3 56:2 60:18 62:23 63:1,11 65:21,24 66:16 67:11 70:6 73:3 74:4,7 75:12 78:1,10 80:9,10 82:11,13,15,23 110:14 113:1 115:14,14,17 116:12 142:16 155:4,20,21 196:4 253:10,12,24 257:7,8,9,10,14 258:11,14 271:6 271:12,22 272:1,5 273:3,7 website 10:16 17:11,13 46:11,13 46:20,22 57:16 64:2,5 156:25 websites 172:4 175:13 weekend 194:23 195:8 went 22:18 39:11 108:5 226:9 264:18 275:25 278:15 283:24 whereof 288:16 whitman 119:19 wide 32:2 41:24 42:1,8,15 118:11	118:12,13,24 128:20 134:19 136:12 146:19 176:5 224:1 227:14 238:5 239:2,3,11 240:24 241:14 wife 140:4 wifi 188:13,14,15 188:16 wifi'd 188:14 wilshire 2:22 window 17:22 windows 52:20 53:10 261:22,25 wipe 111:1,10,15 111:21 wiped 230:25 wiping 87:9 270:7 270:11 wire 11:25 35:15 35:16 wired 112:17 wise 219:22 wish 125:19 129:20 witness 7:9,22 104:23 143:3 189:25 190:6 202:3 251:11 261:22 263:16 266:12 274:19 288:8,11,16 woodard 3:10 word 62:18 203:2 203:2 285:4 words 13:15 91:20 work 14:15,16 22:14 25:7 32:6 53:4,5 55:17 59:13,15 60:17,21	60:25 62:4,16 64:13 79:21 80:13 112:12 116:4 121:6 125:5,12 127:22 128:10,18 129:24,25 130:1 137:6,9 138:9 151:3 152:25 158:15,16 170:6 180:3,5 183:14 196:5,10,11 203:12,15 217:25 277:4,5 worked 58:18 61:4 69:19 267:5 268:9 worker 20:5 99:11 103:23 138:1 168:21 177:14 216:2,11 217:20 226:12 237:13 workers 50:9 121:7,16 169:9 170:13 215:17 218:9 232:25,25 236:12 237:2,20 266:20 working 55:3 56:8 59:17 63:1 66:12 66:16,16,25 67:18 126:2 158:24 159:20 167:15 168:10 170:15 171:3 277:3 works 32:18 53:1 125:6 202:2 250:11 world 9:18 14:9 68:20 worth 214:5 wrap 88:8
---	--	---	--

[wraps - zonolite]

wraps 124:1 writable 148:19 write 185:23 200:20 206:8 212:24 writer 286:5 writes 67:3 112:4 writing 18:2,3 37:3 71:10 195:15 209:18 written 18:6 31:5 56:12 74:21 101:9 107:21 108:6 109:6,8,20 129:17 165:18 224:20,22 239:14 240:25 241:2 283:23 wrong 18:7 58:12 119:25 143:23 199:23 285:11,19 wrote 46:3	years 119:5 175:7 213:22 230:11,14 234:25 235:2 237:23 238:2 275:25 282:22 yellow 98:16 99:1 99:1,22 215:20
x	z
x 100:13 138:16 200:17 204:25 205:1 252:6 271:24 272:19 xavier 35:21	z 100:13 zero 121:23 164:14 169:2 187:17 205:23 206:1,4 216:12,13 219:3,3 zeros 165:1,4 187:17 231:1,2 zip 75:14 152:1 153:7 230:2 zipped 202:17 229:20,20 zone 285:4 zonolite 2:5
y	
y 100:13 171:15 200:18 232:11 252:6 year 28:19 120:9 128:1,2 131:18 135:17 171:17 173:22 225:7,23 230:12 238:16,17 238:19,20,22,23 239:8,21,23 yearly 129:2	

Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate.

The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS
COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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