Analyst: James Thomas Penrose, IV
Date: 2 May 2021

Executive Summary

ElectionSource technicians responsible for the creation and deployment of project files have supreme power in creating configurations that can be used to modify the votes in the EMS and the output of the tabulator paper tapes. Upon review of the Lenberg report dated May 2nd, 2021, ElectionSource technicians create project files for their clients and as a result can access, control, and modify any election they support.

ElectionSource configured and deployed Antrim County's project files that resulted in the modification of the votes during the general election. The Lenberg report indicates that vote modification in Antrim County was consistent with technical manipulation of the project file. This project file was generated and deployed by ElectionSource for the November 3rd, 2020 general election.

In order to research and investigate the Antrim County vote modification it is necessary to perform a full forensic examination and testing of all equipment utilized during the election. Michigan clerks take an oath to faithfully discharge the duties of a clerk including to hold fair and accurate elections. ElectionSource has issued a threat to Michigan clerks interested in conducting independent forensic examinations and testing of election equipment. See Exhibit A.

ElectionSource has the responsibility to review the log files on the Dominion Voting Systems, Election Management System (EMS), the log files are typically viewed by trained technicians with the appropriate experience to properly interpret the software prompts/warnings. During the preparation for the general election their were prompts/warnings ignored by ElectionSource.

ElectionSource failed to utilize version control. Version control is defined as the task of keeping a software system consisting of many versions and configurations well organized. Failure to utilize version control can lead to incorrect vote tally during an election. The lack of policy, procedures, and technical implementation on the part of ElectionSource led to a situation where an inaccurate tally could occur.

An ElectionSource whistleblower has also publicly spoke out about his concerns of fraud over technicians having access to a broad array of ballots from across the State of Michigan via ElectionSource thumb drives. The evidence of what occurred in Antrim County along with the statements of an ElectionSource whistleblower illustrate the multiple avenues for fraud.

Details

ElectionSource Threats Related to Forensics Analysis

ElectionSource sent a letter dated January 4th, 2021 stating that any independent forensic analysis of election equipment would require the Michigan Secretary of State's approval. This letter included a threat of legal action against any Michigan clerk that sought independent investigation related to their equipment in order to uphold their oath of office pertaining to elections.

Weak and Hardcoded Passcodes

ElectionSource performed a number of functions on behalf of Antrim County in order to prepare for and conduct the November 3, 2020 general election. When examining the historic steps taken by the ElectionSource configuring the Antrim County EMS one of the actions taken was to set the default technician passcode for the entirety of Antrim County to a weak passcode. The weak passcode was "123456" set by ElectionSource as found in the configuration files used for the election. Morever, the UserLog file on the EMS also indicated that the election password to open and close the polls was set to "1234678" for more than 19 months prior to the election at which time it was updated to a similarly weak and guessable passcode "11032020", the date of the general election. These passcodes work to give access to the tabulators to open/close, reopen, and rezero the tabulators.

A malicious actor seeking to commit fraud would need to know these passcodes to gain access to the tabulators and enable their operations. ElectionSource provisioned passcodes that were easily guessable and simple trial and error would reveal the correct passcodes with a tractable number of attempts, even done manually by hand by an attacker.

Table 1 below shows all the instances of the ElectionSource technicians making changes to the EMS and setting the default password for opening and closing the polls across the entirety of Antrim County precincts.

Table 1 - UserInfo Log - Default Password Set Log Lines Empty Columns Hidden

Id	userRelatedInfo	executedCommand	__classid	operationTimestamp	logLevel
258FF743-6529-4D24-8875-016DE7DC8448	Admin	Instance with name 'Project Settings' of type 'Project Parameters' modified: defaultPasswordValue changed from '5083972' to '12345678'; tabulatorSameHMACKey=True; cardPartitionSize changed from 'Size 256' to 'Size 512';	LD01	2019-01-08 09:43:13.707	TraceMessage
FDD149A7-99A6-4F43-8176-64A7DC45517A	Admin	Instance with name 'Project Settings' of type 'Project Parameters' modified: defaultPasswordValue changed from '5083972' to '12345678'; tabulatorSameHMACKey=True; cardPartitionSize changed from 'Size 256' to 'Size 512'; createSplitsManually=True; serviceUrl = ''; leadCardConsolidationLevel changed from 'Ballot Type' to 'Precinct Portion';	LD01	2019-01-08 09:43:13.707	TraceMessage

654BC2E6-1F0C-4272-9260-CE67D466568B	Admin	Instance with name 'Project Settings' of type 'Project Parameters' modified: defaultPasswordValue changed from '50831972' to '12345678'; tabulatorSameHMACKey=True; cardPartitionSize changed from 'Size 256' to 'Size 512'; createSplitsManually=True; serviceUrl = '';	LD01	2019-01-08 09:43:13.707	TraceMessage
3B15E033-B474-48EC-B614-E239660B18EF	Admin	Instance with name 'Project Settings' of type 'Project Parameters' modified: defaultPasswordValue changed from '12345678' to '11032020';	LD01	2020-08-03 12:41:51.990	TraceMessage

On January 8, 2019 the default passcode to open/close the polls was set by ElectionSource to be "12345678". This default passcode remained the same until August 3, 2020 when it was changed to "11032020" which was the passcode used during the Antrim County general election in November of 2020.

ElectionSource also hardcoded into the election project files for Antrim County the passcode of "123456" as the "technician passcode." The technician passcode allows for the polls to be re-opened and the tabulators to be re-zeroed. This weak passcode was set by ElectionSource.

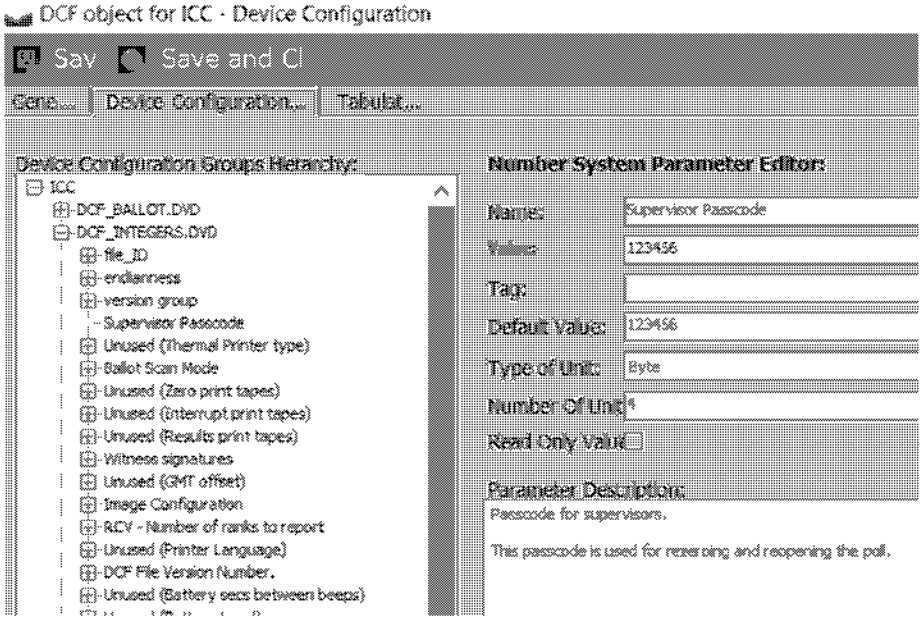


Figure 1 - Default Passcode

Version Control, Configuration Management, and Development Practices

See Figures 3 and 4, ElectionSource set the "DCF File Version Number" associated with the Antrim County election to the same value, "50401," regardless of the updates that were being deployed to the Antrim County Election Project Files and ballot definitions. There was no distinction made between the ICX, ICP, and ICC configurations that were deployed. This lack of version control resulted in

ElectionSource's failure to track that incompatible election configurations and ballot definitions were being deployed in Antrim County on election day.

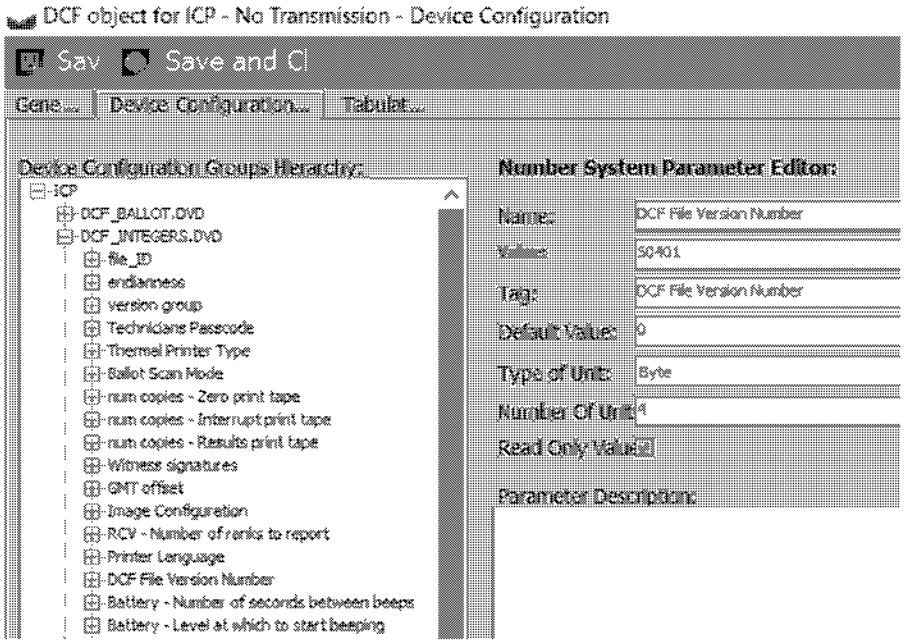


Figure 2 – September 29, 2020 - ICP Version Control Value 50401 (Same for all Tabulators Types)

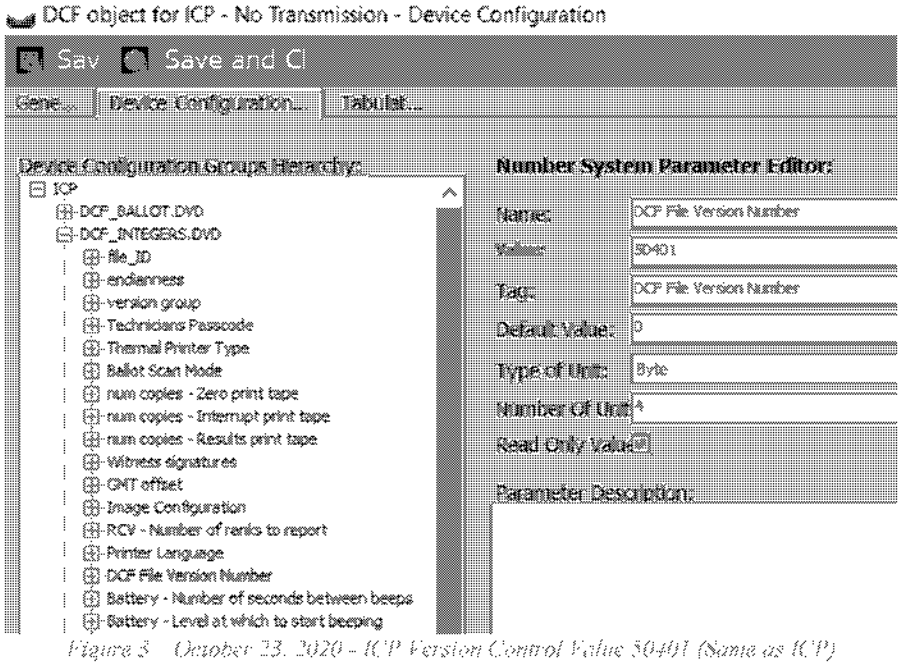


Figure 3 – October 23, 2020 - ICP Version Control Value 50401 (Same as ICP)

Figure 2 shows the original election/ballot configuration provisioned by ElectionSource on September 29th, 2020 for use in Antrim County for their ICPs. Figure 3 shows the final, corrected revision from October 23, 2020, of the election/ballot configuration for use in Antrim County ICPs. There is no evidence of

a versioning process either technical or manual applied by ElectionSource to ensure that the proper version of the configuration would be deployed throughout the entirety of Antrim County. ElectionSource's failure to employ version control led to vote manipulation during the November 3rd, 2020 election.

Error Handing and Remediation

ElectionSource made substantive modifications to the election and ballot definitions that triggered the EMS to provide a number of "prompt" notifications that were acknowledged by the ElectionSource technician preforming the updates. The technician failed or elected not to take action on the notification messages and request a wholesale redeployment of all compact flash cards for all precincts that would be required to proceed with a fully updated election package. Table 2 below shows the notification messages that were generated from the EMS when the technician updated the configuration. The specific message directed to the technician states, "All previously created and deployed election files will be unusable." The technician is then presented with an option to click OK or Cancel based on whether or not they wish to proceed. The last record of this prompt in the log was on October 5, 2020 when the technician selected, "OK" acknowledging that new election files, provisioned on compact flash cards, would need to be deployed as the previously deployed versions will be unusable. ElectionSource failed to address the aforementioned prompts resulting in a modified vote tally.

Id	userRelatedInfo	executedCommand	__classid	operationTimestamp	logLevel
69196343-CC58-41C8-B770-6D25DEA61482	Admin	Prompt information: 'Election Files will be created based on the following parameters. Press Continue to continue the process. All previously created and deployed election files will be unusable. General project information: Number of Districts: 61 Number of Precincts (including split Precincts): 62 Number of Choices: 364 Number of Contests: 141 Number of Offices: 48 Number of Political Parties: 8 Number of Counting Groups: 2 Number of Tabulators: 42 Number of Polling Places: 22 Ballot generation options: Lead Card Consolidation Level: Precinct Portion Consolidate Tail Cards: False Force District Splits: False Separate Voting Box Per Party Affiliation: False Ballot Content Creator: Default Ballot Content Creator '; User answered with: 'OK'	LD01	2020-09-23 13:20:55.740	UserAction
7E017D17-224D-41FF-940D-060AF3740015	Admin	Prompt information: 'Election Files will be created based on the following parameters. Press Continue to continue the process. All previously created and deployed election files will be unusable. General project information: Number of Districts: 61 Number of Precincts (including split Precincts): 62 Number of Choices: 364 Number of Contests: 141 Number of Offices: 48 Number of Political Parties: 8 Number of Counting Groups: 2 Number of Tabulators: 42 Number of Polling Places: 22 Ballot generation options: Lead Card Consolidation Level: Precinct Portion Consolidate Tail Cards: False Force District Splits: False Separate Voting Box Per Party Affiliation: False Ballot Content Creator: Default Ballot Content Creator '; User answered with: 'OK'	LD01	2020-10-05 14:10:09.850	UserAction

Table 2 – UserInfo Log File – Empty Columns Hidden
See complete table in Exhibit B

The final update to the election files prior to the general election was performed by ElectionSource on October 22nd, however, to truly complete the deployment of all

the new election files to all precincts, completely new compact flash cards would need to be provisioned containing the new election files. From October 24th to November 2nd there were no entries in the UserInfo log file, indicating that there were no attempts made by either ElectionSource to complete this compact flash card update process during the crucial weeks ahead of the general election.

The Lenberg report indicates that manipulation of the project files can circumvent the canvassing process. ElectionSource technicians responsible for the creation and deployment of project files have supreme power in creating configurations that can be used to modify the votes in the EMS and the output of the tabulator paper tapes. ElectionSource technicians create project files for their clients and as a result can access, control, and modify any election they support.

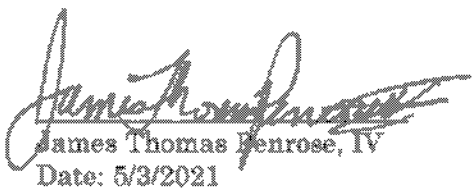
ElectionSource configured and deployed Antrim County's project files that resulted in the modification of the votes during the general election. The Lenberg report indicates that vote modification in Antrim County was consistent with technical manipulation of the project file.

ElectionSource Whistleblower Video

A self-proclaimed ElectionSource employee made a video that was released shortly after the general election in 2020 stating that he believed the biggest risk to elections came from the use of thumb drives to transfer the ballot designs for all the various localities around the State of Michigan supported by ElectionSource. The whistleblower said that it is very easy for an attacker to get a copy of any ballot from the thumb drive and make copies of the ballot of the correct paper stock and then proceed to stuff the ballot box with their own home made ballots based on the ballot designs that ElectionSource has their technicians keep on their thumb drives as part of their routine procedures for handling such sensitive election data.

The full video transcript is attached Exhibit C.

Under the penalties of perjury, I declare that I have read the foregoing report and that the fact stated in it are true.



James Thomas Penrose, IV
Date: 5/3/2021

Exhibit A – Election Source Equipment License Agreements

ElectionSource

January 4, 2021

RE: Equipment License Agreements

Dear Clerks,

This letter is in response to an inquiry regarding a potential "forensic audit" of the Dominion system currently licensed to you. Any transfer of equipment or software to a third party would be in direct violation of the State of Michigan software license terms and conditions, which govern the use of the voting system and software in your jurisdiction. More specifically, the license terms state, "Licensor grants Licensee a non-exclusive, **non-transferrable** license to use the Software" (emphasis added). Further, the license terms state that the licensee may NOT "Transfer or copy onto any other storage device or hardware or otherwise copy the Software in whole or in part except for purposes of system backup."

Any transfer of any component of the voting system to a third party would be a violation of the agreement and Election Source, the State or Dominion may take immediate legal action for such breach of contract.

Both Election Source and Dominion are open to a review of the voting system by an EAC accredited testing laboratory, as previously done during the EAC and State of Michigan certification processes. Any such review must be coordinated with the Michigan Secretary of State.

ElectionSource · 3615 Parkview DR SE · Grand Rapids, MI 49512 · 1-888-742-3533 · F 616-364-0026 · www.electionsource.com

Exhibit B – UserInfo Log

Containing Prompt Messages Regarding Previous Election Files Being Unusable

id	userRelatedInfo	executedCommand	__classid	operationTimestamp	logLevel
7E222529-6072-437A-BB80-E150D64D83C4	Admin	Prompt information: 'Election Files will be created based on the following parameters. Press Continue to continue the process. All previously created and deployed election files will be unusable. General project information: Number of Districts: 61 Number of Precincts (including split Precincts): 62 Number of Choices: 364 Number of Contests: 141 Number of Offices: 48 Number of Political Parties: 8 Number of Counting Groups: 2 Number of Tabulators: 42 Number of Polling Places: 22 Ballot generation options: Lead Card Consolidation Level: Precinct Portion Consolidate Tail Cards: False Force District Splits: False Separate Voting Box Per Party Affiliation: False Ballot Content Creator: Default Ballot Content Creator '; User answered with: 'OK'	LD01	2020-09-18 13:00:04.820	UserAction
EC28AE11-9D75-4F01-972C-833160FB984C	Admin	Prompt information: 'Election Files will be created based on the following parameters. Press Continue to continue the process. All previously created and deployed election files will be unusable. General project information: Number of Districts: 61 Number of Precincts (including split Precincts): 62 Number of Choices: 364 Number of Contests: 141 Number of Offices: 48 Number of Political Parties: 8 Number of Counting Groups: 2 Number of Tabulators: 42 Number of Polling Places: 22 Ballot generation options: Lead Card Consolidation Level: Precinct Portion Consolidate Tail Cards: False Force District Splits: False Separate Voting Box Per Party Affiliation: False Ballot Content Creator: Default Ballot Content Creator '; User answered with: 'OK'	LD01	2020-09-18 13:12:31.543	UserAction

FF53A344-C5EA-4A1E-8ABB-A1C6350DA80C	Admin	Prompt information: 'Election Files will be created based on the following parameters. Press Continue to continue the process. All previously created and deployed election files will be unusable. General project information: Number of Districts: 61 Number of Precincts (including split Precincts): 62 Number of Choices: 364 Number of Contests: 141 Number of Offices: 48 Number of Political Parties: 8 Number of Counting Groups: 2 Number of Tabulators: 42 Number of Polling Places: 22 Ballot generation options: Lead Card Consolidation Level: Precinct Portion Consolidate Tail Cards: False Force District Splits: False Separate Voting Box Per Party Affiliation: False Ballot Content Creator: Default Ballot Content Creator '; User answered with: 'OK'	LD01	2020-09-18 14:08:43.700	UserAction
918CF1BD-F2DF-4C48-A537-FAFCAE2F40CE	Admin	Prompt information: 'Election Files will be created based on the following parameters. Press Continue to continue the process. All previously created and deployed election files will be unusable. General project information: Number of Districts: 61 Number of Precincts (including split Precincts): 62 Number of Choices: 364 Number of Contests: 141 Number of Offices: 48 Number of Political Parties: 8 Number of Counting Groups: 2 Number of Tabulators: 42 Number of Polling Places: 22 Ballot generation options: Lead Card Consolidation Level: Precinct Portion Consolidate Tail Cards: False Force District Splits: False Separate Voting Box Per Party Affiliation: False Ballot Content Creator: Default Ballot Content Creator '; User answered with: 'OK'	LD01	2020-09-23 10:30:08.620	UserAction

CD6C888C-89F6-4861-BAF4-11E9574538E	Admin	Prompt information: 'Election Files will be created based on the following parameters. Press Continue to continue the process. All previously created and deployed election files will be unusable. General project information: Number of Districts: 61 Number of Precincts (including split Precincts): 62 Number of Choices: 364 Number of Contests: 141 Number of Offices: 48 Number of Political Parties: 8 Number of Counting Groups: 2 Number of Tabulators: 42 Number of Polling Places: 22 Ballot generation options: Lead Card Consolidation Level: Precinct Portion Consolidate Tail Cards: False Force District Splits: False Separate Voting Box Per Party Affiliation: False Ballot Content Creator: Default Ballot Content Creator '; User answered with: 'OK'	LD01	2020-09-21 08:48:54.560	UserAction
90CCE52F-E6B3-4EF3-A480-30B13E11C1FB	Admin	Prompt information: 'Election Files will be created based on the following parameters. Press Continue to continue the process. All previously created and deployed election files will be unusable. General project information: Number of Districts: 61 Number of Precincts (including split Precincts): 62 Number of Choices: 364 Number of Contests: 141 Number of Offices: 48 Number of Political Parties: 8 Number of Counting Groups: 2 Number of Tabulators: 42 Number of Polling Places: 22 Ballot generation options: Lead Card Consolidation Level: Precinct Portion Consolidate Tail Cards: False Force District Splits: False Separate Voting Box Per Party Affiliation: False Ballot Content Creator: Default Ballot Content Creator '; User answered with: 'Cancel'	LD01	2020-09-21 09:11:57.397	UserAction

D7443ADD-BCC8-45E6-B0EF-278813BEF952	Admin	Prompt information: 'Election Files will be created based on the following parameters. Press Continue to continue the process. All previously created and deployed election files will be unusable. General project information: Number of Districts: 61 Number of Precincts (including split Precincts): 62 Number of Choices: 364 Number of Contests: 141 Number of Offices: 48 Number of Political Parties: 8 Number of Counting Groups: 2 Number of Tabulators: 42 Number of Polling Places: 22 Ballot generation options: Lead Card Consolidation Level: Precinct Portion Consolidate Tail Cards: False Force District Splits: False Separate Voting Box Per Party Affiliation: False Ballot Content Creator: Default Ballot Content Creator '; User answered with: 'OK'	LD01	2020-09-21 09:12:12.750	UserAction
2843456A-C566-49AA-B7ED-53DEEF43D2B4	Admin	Prompt information: 'Election Files will be created based on the following parameters. Press Continue to continue the process. All previously created and deployed election files will be unusable. General project information: Number of Districts: 61 Number of Precincts (including split Precincts): 62 Number of Choices: 364 Number of Contests: 141 Number of Offices: 48 Number of Political Parties: 8 Number of Counting Groups: 2 Number of Tabulators: 42 Number of Polling Places: 22 Ballot generation options: Lead Card Consolidation Level: Precinct Portion Consolidate Tail Cards: False Force District Splits: False Separate Voting Box Per Party Affiliation: False Ballot Content Creator: Default Ballot Content Creator '; User answered with: 'OK'	LD01	2020-09-21 09:27:30.520	UserAction

518CF1BD-F2DF-4C48-A537-FAFCAE2F40CE	Admin	Prompt information: 'Election Files will be created based on the following parameters. Press Continue to continue the process. All previously created and deployed election files will be unusable. General project information: Number of Districts: 61 Number of Precincts (including split Precincts): 62 Number of Choices: 364 Number of Contests: 141 Number of Offices: 48 Number of Political Parties: 8 Number of Counting Groups: 2 Number of Tabulators: 42 Number of Polling Places: 22 Ballot generation options: Lead Card Consolidation Level: Precinct Portion Consolidate Tail Cards: False Force District Splits: False Separate Voting Box Per Party Affiliation: False Ballot Content Creator: Default Ballot Content Creator '; User answered with: 'OK'	LD01	2020-09-23 10:30:08.620	UserAction
A6069645-C72A-42AE-86D1-9E586E8AB388	Admin	Prompt information: 'Election Files will be created based on the following parameters. Press Continue to continue the process. All previously created and deployed election files will be unusable. General project information: Number of Districts: 61 Number of Precincts (including split Precincts): 62 Number of Choices: 364 Number of Contests: 141 Number of Offices: 48 Number of Political Parties: 8 Number of Counting Groups: 2 Number of Tabulators: 42 Number of Polling Places: 22 Ballot generation options: Lead Card Consolidation Level: Precinct Portion Consolidate Tail Cards: False Force District Splits: False Separate Voting Box Per Party Affiliation: False Ballot Content Creator: Default Ballot Content Creator '; User answered with: 'OK'	LD01	2020-09-23 13:16:00.213	UserAction

69196343-CC58-41C8-B770-6D25DEA61482	Admin	Prompt information: 'Election Files will be created based on the following parameters. Press Continue to continue the process. All previously created and deployed election files will be unusable. General project information: Number of Districts: 61 Number of Precincts (including split Precincts): 62 Number of Choices: 364 Number of Contests: 141 Number of Offices: 48 Number of Political Parties: 8 Number of Counting Groups: 2 Number of Tabulators: 42 Number of Polling Places: 22 Ballot generation options: Lead Card Consolidation Level: Precinct Portion Consolidate Tail Cards: False Force District Splits: False Separate Voting Box Per Party Affiliation: False Ballot Content Creator: Default Ballot Content Creator '; User answered with: 'OK'	LD01	2020-09-23 13:20:55.740	UserAction
7E017D17-224D-41FF-940D-060AF3740015	Admin	Prompt information: 'Election Files will be created based on the following parameters. Press Continue to continue the process. All previously created and deployed election files will be unusable. General project information: Number of Districts: 61 Number of Precincts (including split Precincts): 62 Number of Choices: 364 Number of Contests: 141 Number of Offices: 48 Number of Political Parties: 8 Number of Counting Groups: 2 Number of Tabulators: 42 Number of Polling Places: 22 Ballot generation options: Lead Card Consolidation Level: Precinct Portion Consolidate Tail Cards: False Force District Splits: False Separate Voting Box Per Party Affiliation: False Ballot Content Creator: Default Ballot Content Creator '; User answered with: 'OK'	LD01	2020-10-05 14:10:09.850	UserAction

Exhibit C – ElectionSource Whistleblower

Well, I'm probably gonna get fired over this, but it's something that's been weighing on my mind and something that I feel needs to be said, so I'm going to say it and. I'm just asking that people be respectful of my family. I just had a new baby and I'm just trying to be as open and honest as I possibly can be with where I see potential problems with how our state handled mail in voting. The machine issues that are being looked at by Rudy Giuliani, I think they're barking up the wrong tree there. There is they're going to go through that and they're going to find that the machine code is is pretty solid, in my opinion. Could things have been manipulated? Possibly. Possibly. But the reality of the situation is we've been through many elections in the past and in fact, even a democratic political action group came through in twenty sixteen. They were angry about Donald Trump winning that election. And they came to our our customers and they said, hey, we want we want to do a total recount of the entire state. So we want all of your ballot images. We want to compare them to the to the results that came out of the machines when it came to find out that the the ballot images and the machines were pretty much dead on. There's just there's just no financial incentive for a company like Dominion or a company like an election source to be involved with that that type of widespread fraud. I mean, you're risking your entire company to do that. So that's just that's just not happening, in my opinion. And if it is, it would be a huge surprise to me. It should be looked into for sure, because there's always bad actors. There could be bad actors at a company. But as far as I can tell, that that crowd is barking up the wrong tree. But there is. Unfortunately, because of the way that we did mass mail out voting, there is a potential for. A. A huge vulnerability in the election system and that vulnerability is this right here. All of the ballots that come out of the machines when they are made are digital PDF files. They are unsecured, they there is no chain of custody when it comes to them, and what I mean by that is when they are created on the on the county's software, the more software they are sent out to the printer, they are sent out to our company as as a as a company that needs to create tests for the machines. It's just a logical fact that we need that ballot in order to create those tests. So. You know, back before we did mass mail in voting, nobody thought twice about shipping those digital ballots to the appropriate sources. Nobody really felt like there needed to be a secure chain of command because, you know, what are you going to do with the digital ballot? You know, every precinct gets an allotment of ballots on Election Day and people come in and they vote in person. And there's a certain amount of registered absentee voters and it's minuscule. But the problem is the way we very sloppily handled mass mail out voting, we just kind of sent them around. And there wasn't a whole lot of accurate tracking as to where those ballots were going and who was receiving them and who is sending them back in. And there was some tracking. But just with the the sheer amount of ballots, there wasn't there wasn't there wasn't a good chain of custody for the physical ballots either, so. Because of that, I mean, this flash drive here, I wrote tests for the state of Michigan, so this flash drive here had all of the ballots for Wayne County on it. And I'm here in my bedroom right now. This is. All the ballots for Wayne County were on this, they're not on it anymore, you know, I've deleted them since, but. They were on that last drive before the election and weeks before the election, so, you know, if some. You know, if I can have them in my bedroom, right? You know, nobody nobody blinked

an eye about me having these digital files. So who else had them, right? If nobody cared that I had in my bedroom all the ballots for Wayne County. You know, I know for a fact that when those ballots gets into the printer, they get put on a Google Drive. You know, everybody thinks, you know, Google and Dropbox and Amazon are secure platforms, but in reality, any high level person at those companies has backdoor clearance to those drives. So. You know, all it takes is a scan of those drives and somebody at Google can have all the ballots for Wayne County. I mean, there's just there just is no chain of custody. And I'm not here saying that laws were broken. I'm not here saying that election source is nefarious. Not you're saying that dominion is even nefarious. But what I am saying is there is no chain of custody for digital ballots. So if some outside actor wanted to come in. With a nefarious goal of printing a hundred thousand ballots before election night, it's certainly possible. All they would have needed was this I had it in my bedroom. That's all they would have needed. And you can go. To any printer. You know, probably not a commercial one, because they'd probably be like, you know, why are you printing official ballots with us? You know, who are you? But if you had your own printer, you could I could print it on an inkjet printer at home. You know, I could have taken one of these ballots from this flash drive. And I could have printed 10000 of them. And on a laser printer. At my office. And if I had, you know, printed them there eight and a half by eleven, so it's very common, I could print them as long as I print them on cardstock. You know, there's a there's a there's a ballot stock thickness paper that you need. But I you know, that's about it, that's about the only you know, and I am pretty sure that a machine would read regular weighted paper, you know, don't quote me on that, but I'm pretty sure that they would. They probably read cardstock paper, too. But there's a specific ballot stock that next thickness. And I don't know if it's just regular card stock or not or if there is actually a specific ballot stock thickness. But yeah, it's the machine is agnostic as long as those timing marks which are on the PDF are correct. You know, about that's printed by the official printer versus a ballot is printed at home by a person that has. You know, the ballots ahead of time, because we need the ballots ahead of time, because we need to write tests, you know, it's just something that we need to do. You know, and I'm not in infectious actor. I didn't pass these ballots off to anybody, and I'm sure nobody at election source did and I'm sure nobody at Dominion did. But you know, who's to say somebody at the county knew about them or, you know, maybe not necessarily somebody at the county office, but somebody knew, you know, somebody knew that that these ballots were being stored somewhere and they took them or they or somebody at Google took them off of the Google Drive. I mean, there's plenty of avenues to get these ballots in digital form. And print them off. So I'm. That if there was election fraud. I'm not saying that there was. But if there was. That's probably where it would have been done. And because of our irresponsible. Mail in voting system where we just mass mailed it out, there's plenty of cover for a 100000 ballots coming in at midnight. You know who is going to say who's going to say, oh? You know. That's 100000 ballots, they all came in for Joe Biden. It doesn't matter because nobody there's no chain of custody. Nobody nobody knows what to expect, you know. You know, with any other election, if one hundred thousand ballots came in at midnight. You know, it would be obvious from. But nobody considers that fraud now because maybe there was one hundred thousand ballots that just were stored somewhere and nobody thought to open them up. Nobody knows, and all the

ballots are anonymous, so you'll never know. You'll never know. That's that's the story of this election, is you will never. Be guaranteed because of them, because of the mail system, you will never be guaranteed to know. For sure. The legitimate president. Or any of the downvotes, for that matter. This was a cluster fuck. This was a cluster and people are being disenfranchized. And what I'm here to tell you is that it's totally possible to bring a hundred thousand ballots, totally possible, I had this weeks before the election, plenty of time. You know, if you're a nefarious actor and you want to print a half thousand ballots and put them in boxes just in case. As long as you have this file that I had personally. You can do that. So. Is there avenues for election fraud? Yeah, absolutely. Or is it from the machines? I don't think so possible. Is there a nefarious actors at election source? No, I don't think so. Is there a serious actors at Dominion? I don't really know people at Dominion. I know people election source. They're very honest people. So please, for the love of God, leave us alone. I'm just trying to. I am just trying to tell you what's on my mind, that there is an avenue for possible fraud here. And I just had a new baby, so please, please be merciful to me, leave me alone. Please be merciful to the people at election source and leave them alone. They're good people and the people at Dominion, I'm sure most of them are just good people, you know. Is there a corruption at the top? I don't know anybody at the minute. I don't know the company at all, really. I don't know. We're a contractor for them. But, you know, we've run. Like I said, we run elections in the past for Dominion and they've come out completely scot free. OK. And the issue that happened in Antrim County, I mean, you got you have to leave that clerk alone. She's. You know, what happened there is completely, completely innocent and, you know, they had a late comer to the election, somebody that somebody that didn't get put on the ballot. Right. So they had Cotting for this ballot without that person on it. And they had a card with the coding for the person that. That was supposed to be on the ballot, so they were supposed to run the coding with the extra candidate, instead they ran the coding with the with the with the previous without the candidate in it. And that screwed everything up when they realized it on election night, they reran everything with the proper coding and everything was fine. It was no, it's not some sort of mass conspiracy from Dominion to switch votes. But is there an avenue for election fraud? Absolutely. This there's no chain of custody on ballots, it's a big deal. That's a big freaking deal. And if election officials don't take that seriously. Then they are screwing the public. Out of an accurate election. I wanted to say by.

Exhibit D – CV James Thomas Penrose, IV

James Thomas Penrose, IV
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Arlington, VA, 22202
cv@jimpenrose.org

Education

George Washington University, Washington, DC, USA
M.S. in Computer Science **2004**

Drexel University, Philadelphia, PA, USA
B.S. Magna Cum Laude in Computer Science **2001**
Minor in History and Political Science

Experience

Tenacity Cyber, LLC, Maryland, USA **April 2021-Present**
Owner
Cybersecurity consulting and advisory services.

BlueVoyant, LLC, College Park, MD, USA **April 2021-Present**
Senior Advisor
Providing expert advice on cyber security products, operations, and business to BlueVoyant senior leadership and customers.

BlueVoyant, LLC, College Park, MD, USA **2019-April 2021**
Chief Operating Officer
Responsible for all operational aspects of BlueVoyant's business focused on day-to-day cybersecurity delivery and execution. Primary driver responsible for innovating the Cyber Risk Management Services (CRx) offering. Thought leader to engage with prospects, customers, press and industry analysts articulating BlueVoyant's value proposition, offerings, technology, and tradecraft. Cybersecurity expert with deep technical skills devoted to leading a tremendously talented workforce and inspiring overachievement through tenacious pursuit of success. Spearheaded the growth process by building product, engineering, sales, and marketing capabilities to take the CRx offering from concept to full operations with marquee reference customers over an 18-month period. Supported fundraising during the Covid-19 crisis to retain workforce and continued company operations with no degradation in service throughout the pandemic.

Redacted, Inc, Elkridge, MD, USA **2015-2019**
Executive Vice-President, Head of Product, Head of Services
Served multiple leadership roles in various business units. Created a Managed Security Services (MSS) business from the business case, technology stack selection, Security

Operations Center (SOC) stand-up to initial customer acquisition and onboarding. Senior advisor to clients on all aspects of cyber risk; providing risk assessment, threat analysis, and strategic counsel to C-level executives across the financial, energy, and manufacturing sector. Offering innovative tactics to pursue and deter hostile cyber attackers targeting client businesses before a risk becomes a crisis. Created new 3rd party risk data product offerings and brought the new products to market leading to the creation of a new substantial stream of revenue.

Darktrace, Washington, DC, USA
Executive Vice-President of Cyber Intelligence **2014-2015**
Responsible for overall cyber threat intelligence activities of Darktrace in support of customers globally. Served as the primary assessor of cyber threats detected by Darktrace across all clients. Featured in public speaking engagements on behalf of Darktrace as a subject matter expert and thought leader on cyber operations. Performed media interviews with both television and print reporters on cyber issues.

National Security Agency (NSA), Fort George G. Meade, MD, USA
Sub-Panel Member, National Security Agency Advisory Board **2014-2017**
Participates in the National Security Agency's Emerging Technologies Panel creating insight and recommendations for the Director of NSA.

Chief – Operational Discovery Center **2013-2014**
Built and led a large organization with multiple project teams, both civilian and contractor, and managed a multi-million dollar budget to achieve top priority of enabling discovery in signals intelligence (SIGINT).

Technical Director for Counterterrorism (CT) – SIGINT Directorate 2010-2013
Ensured technical competence in the execution of global CT operations. Drove the creation of new SIGINT capabilities in support of the CT mission. Led engagements with foreign partners in order to build CT capacity with our allies.

Central Intelligence Agency, Langley, VA, USA **2009-2010**
Senior NSA Representative – Technical Targeting Department, Counterterrorist Center
Coordinated joint NSA/CIA operational activities in support of Counterterrorism

National Security Agency, Fort George G. Meade, MD, USA **2008**
Global Network Exploitation and Vulnerability Analyst – Remote Operations Center, Tailored Access Operations
Provided analytic support to drive computer network operations against high priority targets.

Global Network Exploitation and Vulnerability Analyst,
NSA Commercial Solutions Center **2007-2008**
Employed and integrated industry best practices and products into NSA analytic practices.

Mission Manager – NSA/CSS Threat Operations Center **2005-2007**

Led intelligence production and military planning integration activities for a variety of missions focusing on computer network defense, exploitation, and attack.

Watch Operations Officer – Computer Network Operations Fusion Center 2005
Provided rotational 24-hour support as the focal point for intelligence queries from operational military elements conducting computer network operations.

Technical Director – CNO Division, Office of Information Operations 2004-2005
Led technical SIGINT exploitation activities of foreign CNO actors in support of military and intelligence community requirements.

Global Network Exploitation and Vulnerability Analyst,
- Office of SIGINT Support to Information Operations 2001-2004
Performed software development, integration, and testing of SIGINT capabilities to support CNO analysis. Created and integrated new capabilities into the SIGINT system for use by production analysts.

Unix System Administrator – Directorate of Technology 1999-2000
Performed a myriad of Unix system administration activities including full automation of Y2K upgrades for globally deployed, remotely administered systems.

Intrusion Detection Analyst – Information Systems Security Organization 1997-1998
Analyzed intrusion detection logs from various sources, evaluated threats, created incident reports, and made recommendations to remediate vulnerabilities.

Awards

- Presidential Rank Award (Awarded Post Govt Service) **2016**
- Director of National Intelligence Medal (Awarded Post Govt Service) **2015**
- Elevated to Defense Intelligence Senior Level (DISL) from GS-14 **2008**
- National Intelligence Meritorious Unit Citation **2001, 2007, 2008**
- Joint Meritorious Unit Award **2003, 2007**
- Exceptional Performance Bonus **2009, 2010, 2011, 2012**
- Spot promotion from GS-12 to GS-13 for Special Achievement **2005**
- 13 Special Achievement Awards **1998-2008**

Professional Development

- NSA Director's Leadership Program **2013**
- Joint Duty Assignment at Central Intelligence Agency **2009-2010**
- NSA Senior Technical Development Program **2010**
- Graduate Certificate in Computer Security and Information Assurance George Washington University **2003**

Research Experience

- Undergraduate Research Assistant, Drexel University,
  Software Engineering Research Group **2000-2001**

Fraternal Organizations

- Knights of Columbus