EchoMail's Replies to Maricopa County Recorder Office's Responses from October 6, 2021

EchoMail Provides Replies to Maricopa's Four Responses to EchoMail's Anomalies and Findings Uncovered in EchoMail September 24, 2021 Report

AUTHOR
Dr. Shiva Ayyadurai, MIT PhD
SMVS, SMME, SBEE
701 Concord Avenue
Cambridge, MA 02138

OCTOBER 12, 2021

PREPARED FOR

Honorable Mark Brnovich
Attorney General of Arizona
Office of Attorney General
2005 N Central Ave
Phoenix, AZ 85004-2926

Honorable Karen Fann
President of the Senate
Arizona State Senate
1700 West Washington Street
Phoenix, AZ 85007

EchoMail, Inc.
701 Concord Avenue
Cambridge, MA 02138 U.S.A.
Phone: 617-631-6874
Email: vashiva@echomail.com

OCTOBER 2021

EchoMail's Replies to Maricopa County Recorder Office's Responses from October 6, 2021

EchoMail Provides Replies to Maricopa's Four Responses to EchoMail's Anomalies and Findings Uncovered in EchoMail September 24, 2021 Report

AUTHOR
Dr. Shiva Ayyadurai, MIT PhD
SMVS, SMME, SBEE
701 Concord Avenue
Cambridge, MA 02138

OCTOBER 12, 2021

PREPARED FOR

Honorable Mark Brnovich
Attorney General of Arizona
Office of Attorney General
2005 N Central Ave

Honorable Karen Fann
President of the Senate
Arizona State Senate
1700 West Washington Street

TABLE OF CONTENTS

AUTHOR'S BIO

Dr. Shiva Ayyadurai, MIT PHD, SMME, SMVS, SBEE, the inventor of email and polymath, holds four degrees from MIT, is a world-renowned engineer, systems scientist, inventor and entrepreneur. He is a Fulbright Scholar, Lemelson-MIT Awards Finalist, India's First Outstanding Scientist and Technologist of Indian Origin, Westinghouse Science Talent Honors Award recipient, and a nominee for the U.S. National Medal of Technology and Innovation. He holds multiple patents, is the author of twenty books, and has published original research, in leading peer-reviewed high-impact scientific journals including *IEEE, IJPRAI, Nature Neuroscience, CELL Biophysical Journal,* that have received thousands of citations. He has started seven successful high-tech companies, received numerous industry awards, consults for Global 2000 organizations and government, and has been invited to present Keynote and Distinguished lectures at leading institutions such as NSF, NIH, FDA, Harvard, and at MIT, where he delivered the Presidential Fellows Lecture.[1]

In 1978, as a 14-year-old, he was recruited as a Research Fellow by the University of Medicine and Dentistry of New Jersey (UMDNJ), in Newark, NJ after graduating with Honors from a special program in Computer Science at the Courant Institute of Mathematical Science at NYU. At UMDNJ, he invented email – ***the system*** as we know it today – when he was the first to convert the old-fashioned *interoffice paper-based mail system* consisting of the Inbox, Outbox, Memo (To:, From:, Date:, Subject:, Cc:, Bcc:), Attachments, Folders, etc. into its electronic equivalent by writing 50,000 lines of code to create a software system, which he named "Email," – a term never used before in the English language – and went on to be awarded the first U.S. Copyright *TXu 111-775* for "EMAIL, COMPUTER PROGRAM FOR ELECTRONIC MAIL SYSTEM" recognizing him as the inventor of email at a time when Copyright was the only legal mechanism to protect software inventions. Only in 1994 did the Federal Circuit recognize software as a "digital machine" allowing for software patents. Email is not the simple exchange of text messages. Dr. Shiva has never claimed to be the inventor of electronic messaging, which predates email - the system that he created in 1978.[2,3]

Recognizing his talents in software programming, UMDNJ gave him the opportunity to conduct medical research focused on developing pattern recognition classification methods for categorization of sleep signature patterns from babies with Sudden Infant Death Syndrome (SIDS). His research was published in IEEE and presented at the IEEE-EMBS conference in Espoo, Finland. Since that time and for more than forty years, his research and development efforts in academia and industry have been focused in the field of pattern recognition classification systems, systems science, and development of large-scale computational systems for analysis of diverse signals and signatures across a range of industries: biology and medicine, engineering (e.g. aeronautical, civil, mechanical, electrical),

[1] Dr. Shiva Ayyadurai, Biography and Curriculum Vitae, https://vashiva.com/about-va-shiva-ayyadurai/

[2] Facts on the invention of email, https://www.inventorofemail.com/thefacts/

[3] The Man Who Invented Email, TIME, https://techland.time.com/2011/11/15/the-man-who-invented-email/

banking, finance, and, government, as well as across a diversity of applications including handwriting recognition of courtesy amounts on bank checks, automatic analysis and classification of electronic documents e.g. email, ultrasonic and radar wave signature classification for non-destructive evaluation (NDE), signals analysis of Tadoma feature identification, biomarker analysis for determining signatures of efficacy for multi-combination therapies, image analysis for cardiology, and signal detection of fluid flow anomalies in fluidized bed reactors.

He earned a Bachelors in Electrical Engineering and Computer Science, a Masters in Mechanical Engineering, and another Masters in Visual Studies from the MIT Media Laboratory. In the midst of his PhD research in 1993, where he aimed to create a generalized platform – *Information Cybernetics* – for pattern recognition, he won an industry-wide competition sponsored by the White House, Executive Office of the President, to automatically analyze and classify President Clinton's email, resulting in his developing EchoMail® - a platform for automatic classification of electronic documents –, and subsequently launching EchoMail, Inc., a company that grew to nearly $200 million in market valuation. EchoMail today applies its technologies across a diversity of applications.

In 2003, he returned to MIT complete his doctoral work in systems biology in the department of Biological Engineering where he developed CytoSolve®, a scalable computational systems biology platform for mathematically modeling the whole cell. Following his PhD, Dr. Shiva was selected for a Fulbright Fellowship returning him to India where he discovered the systems theoretic basis of eastern systems of medicine resulting in Systems Health®, a new educational program that provides a scientific foundation for integrative medicine. In 2012, Dr. Shiva launched CytoSolve, Inc. with the aim of modeling complex diseases and biomolecular processes to discover multi-combination medicines. His efforts led to CytoSolve earning an FDA allowance for a multi-combination therapy for pancreatic cancer in a record eleven months, developing innovative nutraceutical products, and garnering numerous industry and academic partnerships.

As an educator dedicated to the field of systems science and systems thinking, Dr. Shiva pioneered *Systems Visualization*, a course he taught at MIT to graduate and undergraduate students, which integrated systems theory, narrative story telling, metaphors, and data science to provide a pedagogy for visualization of complex systems. He founded the International Center for Integrative Systems, a research and educational institution and home to Innovation Corps and R.A.W./C.L.E.A.N. Food Certified, for broader applications of systems science.

Dr. Shiva has appeared in *The MIT Technology Review*, *TIME, The Wall Street Journal*, *New York Times*, *NBC News*, *USA Today* and other major media. Dr. Shiva was named Top 40 Under 40 in the *Improper Bostonian*. He continues his passion for entrepreneurialism as Managing Director of General Interactive to incubate, mentor and fund new startups in various areas including healthcare, media, biotechnology, information technology, to name a few.

Dr. Shiva is a member of Sigma-Xi, Eta Kappa Nu, and Tau Beta Pi.

EchoMail's Replies to Maricopa County Recorder Office's Responses from October 6, 2021

EchoMail Provides Replies to Maricopa's Four Responses to EchoMail's Anomalies and Findings Uncovered in EchoMail September 24, 2021 Report

Dr. Shiva Ayyadurai, MIT PhD, SBEE, SMVS, SMME
701 Concord Avenue | Cambridge, MA 02138 | U.S.A.
Email: vashiva@echomail.com | Tel: 617-631-6874

INTRODUCTION

On October 6, 2021, Maricopa County Election Officials via the Recorder's Office ("the Recorder") published four (4) responses to address some of the many anomalies and key findings reported by EchoMail following its audit of the Early Voting Ballot (EVB) Return Envelope images.[4] For reference, Appendix A in this manuscript provides screen shots of the Recorder's four (4) responses. EchoMail's observed anomalies and key findings, from its audit of the Early Voting Ballot (EVB) Return Envelope images, are documented in the September 24, 2021 report submitted to the Arizona State Senate ("the Report"), as well as in a Powerpoint presentation made on September 24, 2021 to the Arizona State Senate ("the Presentation").

[4] *https://recorder.maricopa.gov/justthefacts/pdf/Maricopa%20County%20Analysis%20of%20Senate%20Review%20%E2%80%93%20EchoMail%20Report.pdf*

ECHOMAIL REPLIES

I. EchoMail's Reply to Maricopa's Response #1

Maricopa's Response #1 is shown in Appendix A. Using misinformation and disinformation, the Recorder in this reponse fails to address a fundamental discrepancy that violates the central principle of Early Voting Ballot (EVB) processing:

> **<u>Every EVB</u> is expected to be accompanied by an EVB's Return Envelope. Given every EVB Return Envelope, per the Recorder's acknowledgment, is scanned into a digital image, every EVB must have at least <u>one EVB Return Envelope image</u> associated with the same voter-ID.**

EchoMail received a total of ***1,929,240*** EVB Return Envelope images. EchoMail identified 17,322 duplicate EVB Return Envelope images from 17,126 unique voters. After removing the 17,322 duplicate EVB Return Envelope images, EchoMail identified ***1,911,918 unique EVB Return Envelope images***. Following the aforementioned principle, this means that Maricopa should have reported 1,911,918 EVBs assoicated with unique voter-IDs. However, Maricopa reported in their *CANVASS* Report that they had a total of **1,918,463** unique EVBs.

This means that Maricopa has *<u>6,545 MORE EVBs</u>* than EVB Return Envelope images.

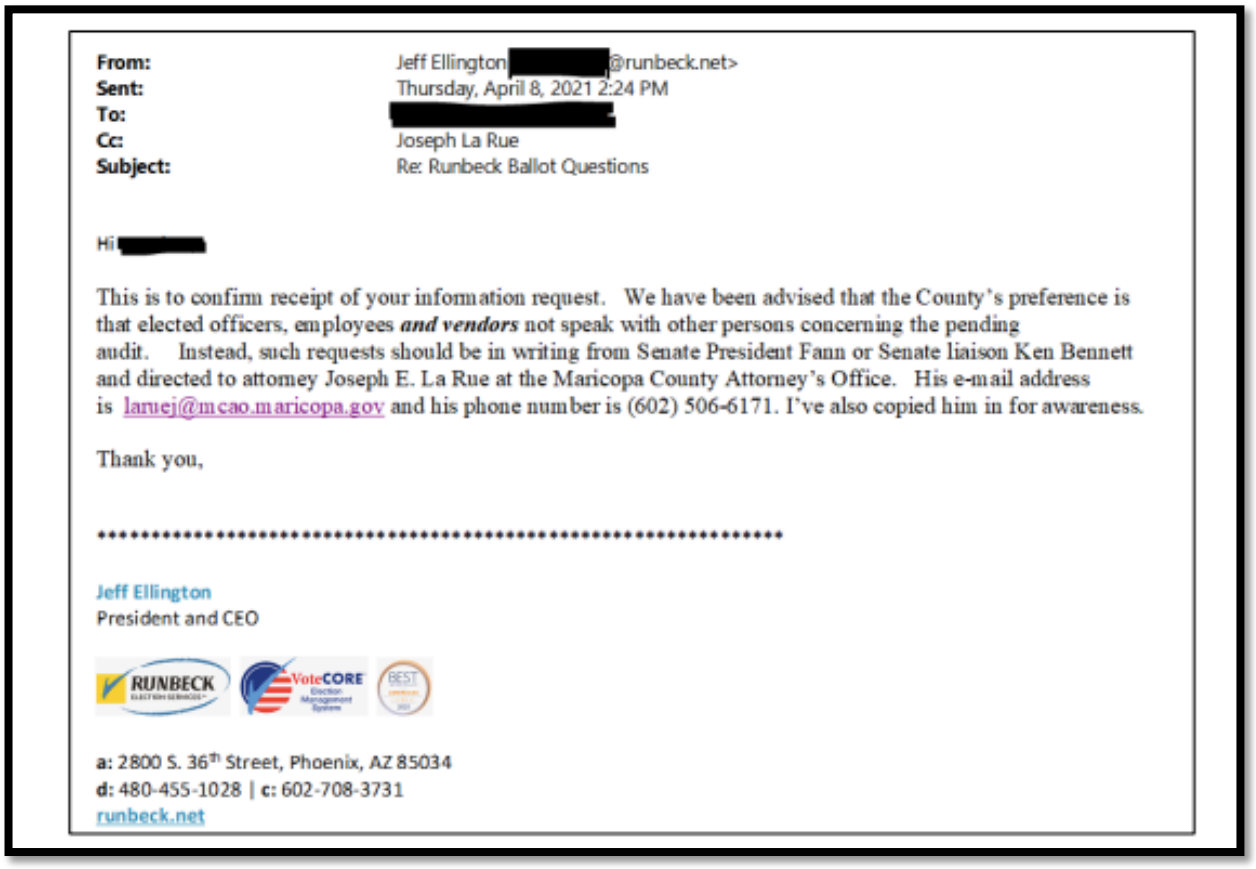
Instead of addressing this fundamental discrepancy, the Recorder's disinformation aims to assert that their intimate knowledge of "curing," during which a duplicate image for an EVB Return Envelope may be produced, releases them from having to offer a reason as to why this 6,545 disrepancy exists. The Recorder further puts forward misinformation to falsely state that the number of duplicate EVB Return Envelope images uncovered by EchoMail is 17,126. ***This is false.*** EchoMail has stated unequivocally throughout the Report and in the Presentation, that EchoMail uncovered ***17,322 duplicate EVB Return Envelope images*** originating from 17,126 voters with unique voter-IDs. Most of those 17,126 voters had 2-copy duplicates; however, some had 3-copy duplicates, and a few had 4-copy duplicates, as detailed in the Report. ***Never has EchoMail stated that it uncovered 17,126 EVB Return Envelope images.***

In summary, EchoMail's analysis, based on the images that EchoMail received from the Recorder, reveals **there are 6,545 FEWER EVB Return Envelope Images than the number of EVBs.** This means there is ***not*** ONE EVB i.e. BALLOT, PER ONE EARLY VOTING BALLOT ENVELOPE IMAGE – violating the aforementioned central principle of EVB processing.

Maricopa County Officials Un-Cooperative In Providing Information on Duplicates

Media proxies for the Maricopa County Election Officials have put forward misinformation that EchoMail should have contacted Runbeck to get answers on the nature of the duplicates, and such media proxies as the Arizona Mirror have asserted to the public that Runbeck would have been more than happy to provide information

directly to the audit team. **This is patently false.** Below is an email from the President and CEO of Runbeck, Jeff Ellington, to one of the audit team members, in which he clearly states that he has been "advised that the County's preference is that … vendors" such as Runbeck not speak with other persons, e.g. members of the audit team.



From: Jeff Ellington [redacted]@runbeck.net>
Sent: Thursday, April 8, 2021 2:24 PM
To: [redacted]
Cc: Joseph La Rue
Subject: Re: Runbeck Ballot Questions

Hi [redacted]

This is to confirm receipt of your information request. We have been advised that the County's preference is that elected officers, employees ***and vendors*** not speak with other persons concerning the pending audit. Instead, such requests should be in writing from Senate President Fann or Senate liaison Ken Bennett and directed to attorney Joseph E. La Rue at the Maricopa County Attorney's Office. His e-mail address is laruej@mcao.maricopa.gov and his phone number is (602) 506-6171. I've also copied him in for awareness.

Thank you,

****

Jeff Ellington
President and CEO

RUNBECK VoteCORE BEST

a: 2800 S. 36th Street, Phoenix, AZ 85034
d: 480-455-1028 | c: 602-708-3731
runbeck.net

Figure 1 – Email Exchange Between Audit Team Member and Runbeck CEO.

The audit team member further stated that:

> *"The audit team made numerous phone calls to Maricopa County to get clarification about printers, ballot paper, processes, and procedures but calls were not returned. Through the Senate Liaison, the audit team attempted to*

engage the County to produce documents, obtain samples of legal ballots and ballot paper and explain anomalies that were seen during the audit, but the County was not willing to provide answers or documents." [The full statement is provided in Appendix B.]

Moreover, EchoMail's project manager attempted multiple times to contact the Maricopa Election Officials to understand the reason for duplicate images. EchoMail's project manager was unable to get any responses, for example, on how duplicates are processed or why the counts differed, even after multiple tries.

Date	Time	Call to	Description	Duration
9/20/21	9:35 A.M. PST	602-506-1511	Maricopa Recorder's Office	2 minutes
			no contact- phone maze only	
9/20/21	9:37A. M. PST	602-506-1511	Maricopa Recorder's Office	4 minutes
			Waited in phone maze- Don't recall if I left message	
9/20/21	3:01 P. M. PST	602-506-3535	Decided to try a different office number	35 minutes
			After 25 minute phone maze/ wait, a male answered	
			I told him I was part of the EchoMail team performing	
			a signature verification Audit for 2020 General Election,	
			our numbers were off from theirs, and that we	
			needed a contact familiar with their EVB	
			approval processs in order to resolve.	
			After being put on hold another few minutes, he returned with	
			the recommended name and telephone	
			number of Hope Olguin	
9/20/21	3:37 P. M. PST	602-372-2262	Called Hope Olguin, no answer, left no message	1 minute
9/20/21	3:37 P. M. PST	602-372-2262	Called Hope Olguin and left detailed message:	2 minutes
			"Hello Hope- this is Phil Evans- I'm part of the	
			Echomail data team tasked with auditing Early Ballot	
			Evelope signatures from the 2020 General Election.	
			I was told you might can assist us in reconciling the	
			numbers from our image Audit with those in your	
			Canvass report. Our numbers are off from yours and	
			we'd like clarification on a few items. Please	
			call me back at 864-xxx-xxxx."	
9/20/21	4:14 P. M. PST	602-372-2262	Called Hope again but went to voicemail	1 minute
			don't recall leaving message	
10/4/21			Hope has still not returned my call	

Figure 2 – Diary of attempts on 9/20/2021 to connect with Maricopa County Officials.

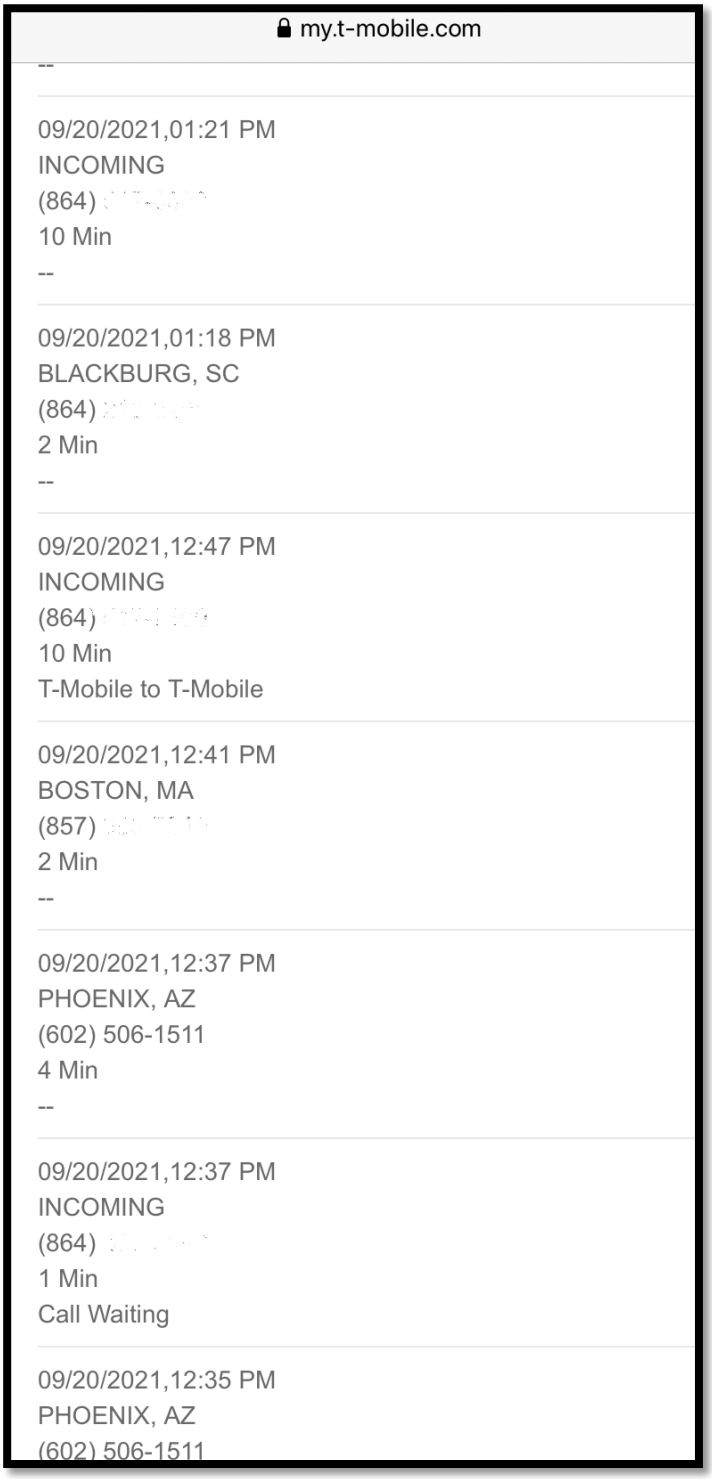


Figure 3 – Phone log of attempts on 9/20/2021 to speak with Maricopa County Officials.

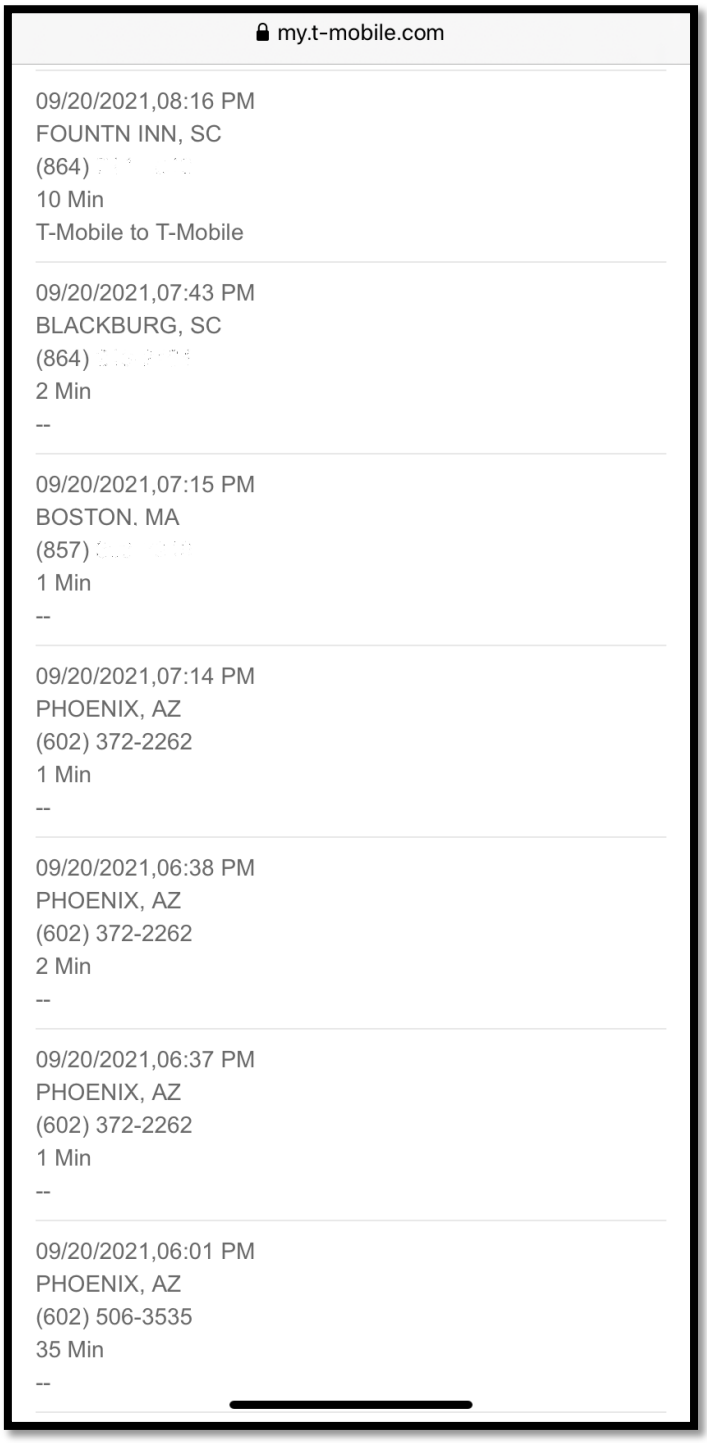


Figure 4 – Phone log of attempts on 9/20/2021 to speak with Maricopa County Officials.

After having heard of the County's lack of cooperation from the Arizona State Senate, in the larger audit, it seemed futile to waste precious time, waiting on hold, and tracking recalcitrant officials. Above is the evidence in Figures 2-4, of our project manager's attempts at least six times, a few days before the audit report was due, to connect with Maricopa County Election Officials. On one occasion, he waited on the call for nearly 30 minutes. **As of the writing of this document, and with news of the Attorney General of Arizona preparing for further investigation, Maricopa election officials have yet to return even one call to the EchoMail project manager whose intentions were to have dialog.**

Maricopa Recorder's Is Purposefully Avoiding the Fundamental Question

In summary, and to reiterate, the Recorder, through the aforementioned misinformation and disinformation, has yet to answer the fundamental question:

> ***WHY DOES THE RECORDER'S OFFICE HAVE 6,545 MORE EVBs THAN THE ACCOMPANYING EVB RETURN ENVELOPE IMAGES?***

II. EchoMail's Reply to Maricopa's Response #2

Maricopa's Response #2 is shown in Appendix A. The misinformation in the Recorder's Response #2 claims that EchoMail concluded that "Early Ballots [Were] Counted With Blank Signatures and Scribbles on Envelopes." Per the *Scope of the Audit,* as detailed in the Report, EchoMail was specifically commissioned to extract the Signature Region on the EVB Return Envelope image, and then to classify that Signature Region as Blank, Likely Blank, Scribble, or Signature based on a non-white pixel density of 0%, 0%+ to 0.1%, 0.1%+ to 1%, and 1%+, respectively.

EchoMail was **not provided** with any data as a part of this Scope, to know if the EVBs were **"... *counted* with Blank Signatures and Scribbles on Envelopes."** Per the Scope, EchoMail was to identify ***how many*** Signature Regions were Blanks, Scribbles, and Signatures. In meeting the obligations of the Scope of the Audit, EchoMail identified 1,919 Blanks and 2,580 Scribbles.

Though beyond the Scope of the Audit, EchoMail did, more recently, perform additional supervised (human) review of those EVB Return Envelopes, classified as Blank and Likely Blank, and found many examples of *completely* Blank envelopes (where in there is not any written text of any kind on the envelope), and their duplicates i.e. after being "cured," wherein there is "VERFIED & APPROVED – MCTEC" STAMP, and/or such completely Blank envelopes were indeed counted. Such counts were verified following lookup of those voter ids associated Blank EVB Return Envelope images in the VM55, which contains the voter-ID of every vote counted. In summary, EchoMail now has examples of

complete Blanks (and their duplicates) which were counted as votes. These examples have been submitted to the Attorney General of Arizona.

III. EchoMail's Reply to Maricopa's Response #3

Maricopa's Response #3 is shown in Appendix A. This is misinformation, EchoMail never stated, "Signature Verification Was Not as Rigorous in 2020 Compared to 2016." What EchoMail stated was the following:

> *"While the number of EVB return envelopes in Maricopa for the 2016 general election increased from 1,257,179 to 1,918,463 EVB return envelopes for the 2020 general election, representing a 52.6% increase (or by 661,284 EVB return envelopes), the number of rejections from Signature Mismatches of EVB return envelopes, from 2016 to 2020, decreased by 59.7%.* ***This inverse relationship requires explanation.****"* [p.15 of the Report]

The fact is EchoMail requested ***an explanation*** for the "inverse relationship" and did not assert in anyway the rigor of the signature verification process. Moreover, on page 99, of the Report, EchoMail knowing of the 2019 legislation also put forward another question:

> *"Did new policies or legislation have an impact on this Signature Mismatch Rate reduction?"* [p.99 of the Report]

At the heart of the anomaly observed and documented by EchoMail on this issue was to motivate Maricopa County Election Officials to be transparent in sharing with the public

the details of the Signature Verfication process. What is the 27-point algorthim used? Was that 27-point algorithm used in 2016 and 2020? Was the algorithm relaxed for 2020? If so, in what manner? What are the Standardized Operating Procedures (SOPs) for Signature Verification? The answers to these questions will provide the public the opportunity to build confidence on the systems integrity of a foundational aspect of processing EVB Return Envelopes: *Signature Verification*.

As of the writing of this document, the Recorder's office has yet to provide answers to these questions.

IV. EchoMail's Reply to Maricopa's Response #4

Maricopa's Response #4 is shown in Appendix A. This is further misinformation by the Recorder. EchoMail, in its September 26, 2021, communication never stated "Compressed Images Reduce Signature Verification Quality." Rather EchoMail posed nineteen (19) new questions, after EchoMail was informed by the County in a cryptic message, via Randy Pullen, that the EVB Return Envelope images were compressed images. To be clear, neither Randy Pullen, who provided us the images, nor Cyber Ninjas, who had worked on this audit long before our commissioning, were aware of such compression. Once again, it is unfortunate that the Recorder's office does not provide the SOPs. Our posing the anomalies, however, has elicited from the Recorder's Office to the broad public, *for the first time*, that there are no high-resolution images.

In this response, the Recorder's Office also stated, "This is the only image taken of the envelope." ***This is false***, since during "curing" additional image scans may be taken of the physical envelope.

In this response, the Recorder's Office also states because the "verified and approved" stamp is black, ***if it is placed over any filled area (black or red),*** that piece of the stamp would also be hollowed out. ***This is also a false statement.*** In their response, they provide this example of the stamp behind both triangles: the large black one and small red one:

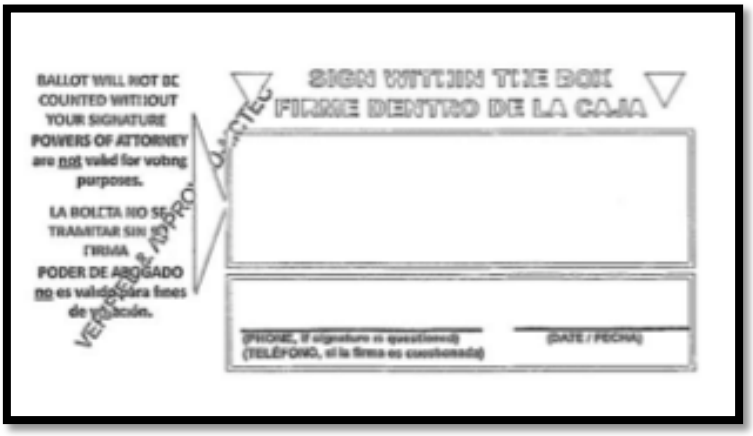
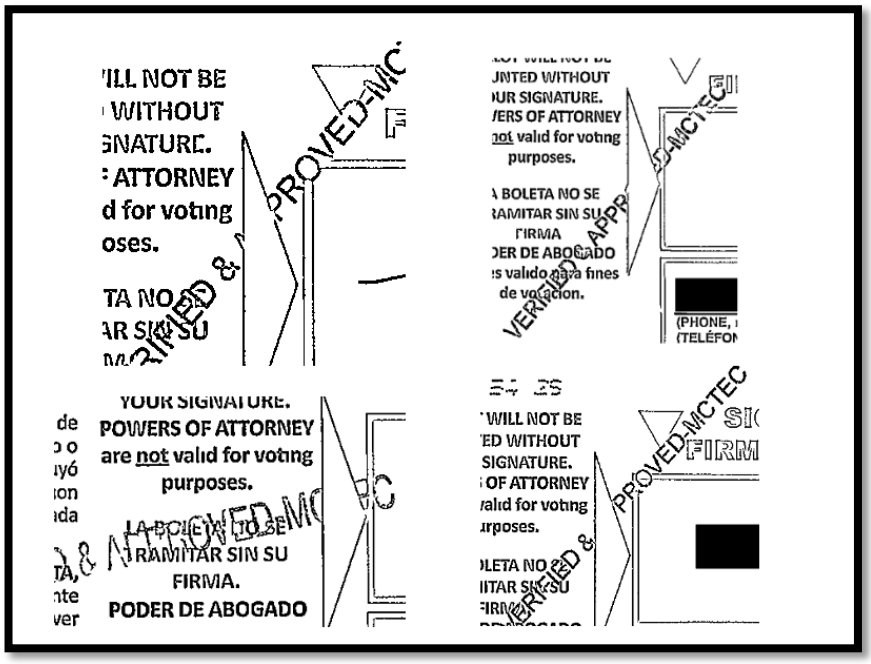


Figure 5 – Example from County of STAMP BEHIND BOTH TRIANGLES.

However, EchoMail has in its possession multiple examples of the STAMP appearing behind **and** above the red triangle as shown here:



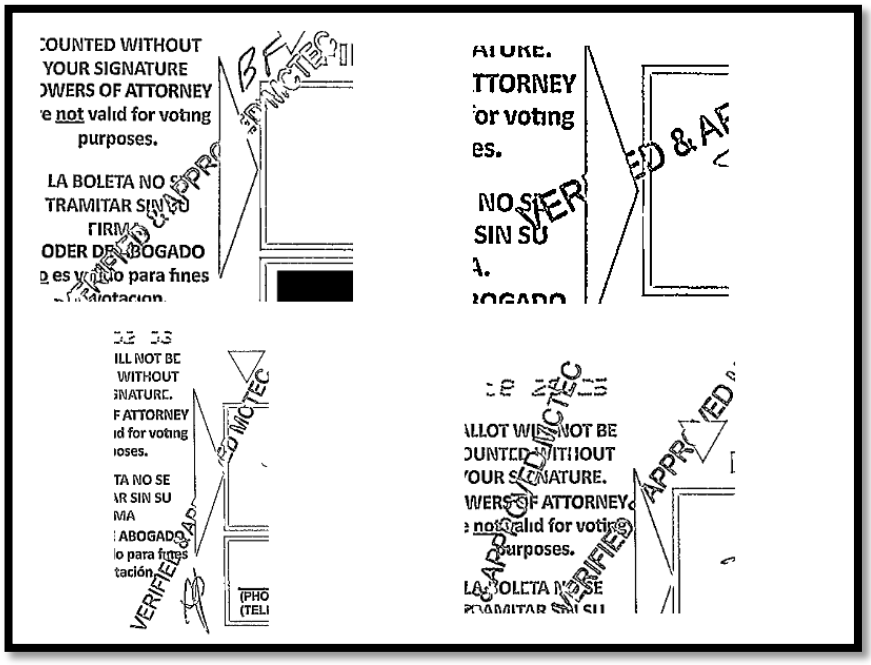


Figure 6 – EchoMail's Examples of Stamps in Front and Behind Smaller Triangles.

Also, the ***assertion*** in this response that, "*No modifications are ever made to the original envelope images. The signature verification program only allows staff to view the signature. No changes could be made to alter it,"* is not sufficient to demonstrate to the public that systems used for processing such images cannot be altered. Assertions do not make fact. The public deserves access to the Standardized Operating Procedures (SOPs) and the technologies in place for the Chain of Custody management. For example, is there a version control system for these images?

Finally, the Recorder's office in this response had put in this statement:

> *"There are alternate format affidavit envelopes that do not undergo the traditional inbound scan process because they are not returned in the standard "envelope" format. Those include ballots returned from military and overseas voters, and large print and braille ballots. There were a total of 9,643 of these affidavit images provided to the Senate to accompany the traditional digital images. While we don't use these images to verify signatures, they are scanned for record keeping purposes."*

EchoMail is fully aware of these EVB Return Envelope images from "military and overseas voters, and large print and braille ballots." A member of the EchoMail team, in reading this statement, initially thought these affidavit images could explain the discrepancy of 6,545. However, these are included in EchoMail's count of ***1,911,918 unique EVB Return Envelope images.*** Regardless the author's true intent at the Recorder's office,

this statement could serve as disinformation to mislead the public that EchoMail had not accounted for these counts, and they may be the reason for the 6,545 discrepancy.

Conclusion

The public should be fully aware that the Recorder's Office per the four (4) responses provided in Appendix A has: 1) Not even addressed the issues in these responses but, rather, has provided misinformation and disinformation to distract and divert from the real issues; and 2) Not addressed all the anomalies and key findings.

Many Unanswered Questions

The unanswered questions include though not limited to:

A) Why are there 6,545 more EVBs than EVB Return Envelope Images?

B) Where are the Standardized Operating Procedures (SOPs) for the various areas identified in the Report and the Presentation e.g. curing, signature verification, compression, etc.?

C) How does the Recorder's Office explain the now nearly 20+ examples of an individual at the SAME ADDRESS, SAME NAME, having TWO VOTER-IDS, who submitted TWO EVBs, which were COUNTED as TWO DIFFERENT VOTES?

D) Why are completely BLANK EVB Return Envelopes being stamped and the accompanying EVBs being counted as votes?

E) Why is the STAMP appearing in front and back of the triangle?

F) Will the County answer the 19 other questions posed on September 26, 2021 concerning EVB Return Envelope image management

The Need for an Open Forum

EchoMail believes, as stated before, that an open forum at this point is the only effective and productive way to resolve the anomalies and key findings uncovered in the Report and the Presentation. EchoMail invites Maricopa County Election Officials to participate and is committed to making public overtures to the County for such an Open Forum.

Appendix A

Maricopa's Response #1 to EchoMail's Report

Faulty Claim: Duplicate Early Ballot Envelope Images & Not Reported in Canvass (pg. 14)

Maricopa County only counts one ballot per eligible voter. The canvass is designed to report ballots, not envelopes. The Senate's contractor did not understand that Maricopa County may scan an envelope multiple times as a voter "cures" a signature issue or signs a blank envelope. Early ballot envelopes are NOT opened until a signature is verified.

Verified and Approved Stamp

For envelopes with blank or questionable signatures, we log on the physical envelope all the contact and verification methods used to reach the voter. If a signature issue is "cured" by the voter, staff stamp the envelope using the "Verified and Approved MCTEC" stamp, and the envelope is scanned again.

Analysis: There may be multiple pictures of an envelope, but only one ballot is counted per voter.

~~17,126 duplicate envelopes~~

Maricopa's Response #2 to EchoMail's Report

Faulty Claim: Early Ballots Counted with Blank Signatures and Scribbles on Envelopes (Pg. 14-15)

When an envelope image is blank or a signature is questioned, staff first look at the physical envelope. In some cases, the voter has signed elsewhere on the envelope. If there is truly no signature on the envelope or the signature is questioned, Maricopa County works to contact voters to "cure" the issue. Once verified, these envelopes are stamped and rescanned. Only after this process is the envelope opened and the ballot counted.

Additionally, some voters have signatures that are an 'x' or another mark. In these instances, the official signature on file confirms that mark. These may be voters with visual impairments, or who have had a stroke or other medical condition that would impair their ability to sign the envelope. In most cases, these voters are supported by bipartisan Special Election Boards trained in this area.

Analysis: The County reviews the image and physical packet to determine a valid signature. Questioned signatures and blank envelopes are cured by the voter before the envelope is opened or counted.

~~2,580 scribbled signatures~~

~~1,919 blank or likely blank envelopes~~

Maricopa's Response #3 to EchoMail's Report

Faulty Claim: Signature Verification Was Not as Rigorous in 2020, Compared to 2016 (pg. 15)

The increase in the number of cured signatures as compared to 2016 is a result of a law passed in 2019, that allows voters five business days after Election Day to cure a questioned signature. The law also requires that blank envelopes must be signed by the voter no later than 7 p.m. on Election Day. As Maricopa County planned for a large number of early ballots dropped off on Election Day, combined with the new curing law, the Elections Department hired 40 additional staff to work Oct. 29-Nov. 10. These employees were specifically assigned to contact voters with questioned signatures. Maricopa County is committed to following state law and helping people vote.

Analysis: The decrease in early ballots not being counted was directly due to a law passed in 2019.

Last Updated 10/06/2021

~~Less rigorous verification process~~

Maricopa's Response #4 to EchoMail's Report

Facts About Maricopa County Binary Image Format

The image on the left is a demonstration of what the physical envelope looks like without a binary scan. When returned, the envelope is scanned using a high-speed binary format (right image). Any filled area on that binary scan is "hollowed out" and only shows the outline of the shape or words. While the "verified and approved" stamp is used after a rigorous verification process, it appears to be behind the "hollowed out" arrow because it is stamped over the black and red arrows.

ECHOMAIL LETTER RESPONSES	ANALYSIS
Faulty Claim: Compressed Images Reduce Signature Verification Quality (Sept. 26) There are no such things as "pre-compression" envelope images. All envelopes are scanned using a binary image format. This process reduces the file image size, while actually improving the resolution for these high-speed scanned images. This is the only image taken of the envelope. Staff can use that image or review the physical envelope to verify a signature.	
Binary Envelope Pictures Early ballot envelope images captured are binary (consistent with nearly every high speed mail sorter in the world). The middle part of images are "hollowed out" to make it more readable to machines, improve speed and reduce file size. Because the "verified and approved" stamp is black, if it is placed over any filled area (black or red), that piece of the stamp would also be hollowed out.	**Compressed images reduced signature quality**
Access to Envelope Images and Security Envelope images are received through a Secure File Transfer Protocol (SFTP) process. No modifications are ever made to the original envelope images. The signature verification program only allows staff to view the signature. No changes could be made to alter it.	
Non-Traditional Envelopes There are alternate format affidavit envelopes that do not undergo the traditional inbound scan process because they are not returned in the standard "envelope" format. Those include ballots returned from military and overseas voters, and large print and braille ballots. There were a total of 9,643 of these affidavit images provided to the Senate to accompany the traditional digital images. While we don't use these images to verify signatures, they are scanned for record keeping purposes.	
Analysis: The binary format reduces the file image size, while actually improving the resolution for these high-speed scanned images. No images are altered in this process.	

Appendix B

Affidavit of Audit Team Member

Runbeck Election Services is a privately owned company that provided election services including the printing and mailing of all mail ballots for Maricopa County in the 2020 General Election. Prior to the start of the audit, members of the audit team conducted research into the paper, ink, toner and format of the official ballots. As part of that research, the audit team contacted Runbeck CEO, Jeff Ellington, to ask several general questions about the ballots used in the 2020 General Election. Initially, Jeff Ellington agreed to a call but then asked for the questions in writing. As requested, the audit team sent Mr. Ellington 5 general questions via email. Mr. Ellington responded to that email and said that Maricopa County instructed him that vendors, even private companies, should not to speak with auditors. See email below:

From: Jeff Ellington [redacted]@runbeck.net>
Sent: Thursday, April 8, 2021 2:24 PM
To: [redacted]
Cc: Joseph La Rue
Subject: Re: Runbeck Ballot Questions

Hi [redacted]

This is to confirm receipt of your information request. We have been advised that the County's preference is that elected officers, employees ***and vendors*** not speak with other persons concerning the pending audit. Instead, such requests should be in writing from Senate President Fann or Senate liaison Ken Bennett and directed to attorney Joseph E. La Rue at the Maricopa County Attorney's Office. His e-mail address is laruej@mcao.maricopa.gov and his phone number is (602) 506-6171. I've also copied him in for awareness.

Thank you,

****

Jeff Ellington
President and CEO

a: 2800 S. 36th Street, Phoenix, AZ 85034
d: 480-455-1028 | **c:** 602-708-3731
runbeck.net

The audit team made numerous phone calls to Maricopa County to get clarification about printers, ballot paper, processes, and procedures but calls were not returned. Through the Senate Liaison, the audit team attempted to engage the County to produce documents, obtain samples of legal ballots and ballot paper and explain anomalies that were seen during the audit, but the County was not willing to provide answers or documents.