

279 Vale Way  
Boulder Creek, CA 95006

March 3, 2007

Secretary Debra Bowen  
1500 11th Street  
Sacramento, CA 95814

Dear Secretary Bowen,

First, I want to congratulate you on your victory this fall. I remember election day vividly, since I worked at Democratic headquarters in nearby Santa Cruz. I was on the phone making calls for some critical campaigns, including yours. After meeting with you at Karl Auerbach's house last February, I was really excited for California's future. It was clear to me in short order that you have a fantastic combination of dedication, experience, and technical knowledge that are ideal for the secretary of state position. Having been disappointed several times in recent years regarding elections (and some of that due to shaky election systems!), I was almost afraid to hope we could get you elected. When L.A. was amongst the last counties to return numbers, you were still below the 50% mark. I was honestly shaken! When victory was finally declared, your win was the icing on the most amazing victory cake we've tasted in years.

I had to laugh to myself when seeing your new e-mail address. Indeed, you answered all of our SOS's- regarding what is probably the most pressing concern to our democracy. As you are well aware, ALL of the responsibilities the people give to their government ride on the basic right to vote and elect the people we choose. When we lose the ability to have our votes properly counted, we lose our democracy and have to fight to win it back. Thank you for taking a most personal interest in this crucial right- indeed risking everything you've done so far and putting it all on the line to become secretary.

I want to take a moment to mention AB 852, although I doubt it needs mentioning to you. Pretty much preaching to the choir here! But in the same celebratory vein as my previous paragraphs... having wording like this on the verge of becoming law- wow! Is this not the moment we've all been waiting for! As you are painfully aware, today's voting systems are so far from the intent of election law, which expressly mandates a transparent method for conducting vote counting. Proprietary (secret) systems for counting votes are not only a threat to democracy, they are at the least capable of producing incorrect winners due to numerous software flaws, and are at worst a means to secretly and *easily* throw an election to the loser, as Hugh Thompson recently proved.

Unfortunately, we live in a society where many people believe that ends justify the means. I think Democrats (in general) stand in stark opposition to that. That's why I'd rather see a Democrat be Secretary of State any day. However, the truth remains: until we have electronic voting systems that guarantee transparency- *especially* transparency in terms of how those systems are implemented- we leave the door open to the "ends justify the means" people in our society to use those systems to their advantage. I have to say, I think this *has* happened in recent years, although there is no publicly accepted truths regarding this.

Back to AB 852, I think that this proposed law has several key facets that give it the go ahead in my mind:

- Ability for today's current vendors to become compliant. That means that today's systems can be used to conduct elections under the law, along with a newly established ability to insure their accuracy in a really public way!
- Ability for us to take a serious look at what we have today and find out where the flaws are.
- The ability for the ideal system- an open source system- to actually become the viable solution. For a variety of reasons- including transparency, cross-checkability, security, and cost- an open source system is *perfect* for the job of counting votes. There is no security through obscurity when it comes to software.
- The *critical* ability to digitally sign the software that was inspected and guarantee that the software in the systems on election day is "one and the same".
- There is a reasonable timeframe in the law to accomplish what it sets out to do.

I realize there are going to be some challenges, including figuring out how to verify these systems. However software vulnerability correction is starting to be a perfected art in the industry, and I've been especially impressed with the open source community's ability to not only find such issues but also to correct *and test* those issues in a very short amount of time. My job as a professional is actually to safeguard the Adobe Reader software from vulnerabilities. I manage the penetration testing team. We spend a lot of time testing our software solution, as well as asking for external reviews and responding to external reports of vulnerabilities. At this point, it keeps me busy to say the least!

Nonetheless, when I look at how the Mozilla foundation has responded to software vulnerabilities, I am incredibly impressed. For instance, the javascript interpreter that powers Mozilla is embedded in every Adobe Acrobat Reader. The speed at which issues are found and fixed in Spider Monkey (the code name for this engine) are remarkable. Standardized tests allow them to quickly regress changes to make sure fixes haven't introduced other issues. And quite frankly, I am surprised by the number of times that simple code inspection has found bugs. With proprietary systems (such as our own reader), source code analysis is as extensive as we can afford people to do that work. However, with open source efforts, there are people dedicated to those reviews, and *then there are another ten thousand people doing it for free!* This gives open source software a leg up that no one else can offer. And as you know, once a program gets much past 10 lines of code, it's almost impossible to make perfect.

I must admit, as a person who has worked over 15 years in the shrink-wrap industry (and close to 14 years at Adobe), I sometimes wonder if open source will eventually take away my living. Right now, I think there is a healthy ecosystem for both proprietary and open software efforts, and they each have their own role. But if there was ever a *perfect* role for open source code- it is voting system software.

I hope you will be able to help California shepherd this fledgling bill to fruition. As we all know around here: as goes California, so goes the nation. A victory for transparency here will create many successful copies around the country, and maybe around the world. That means there is *no better place* and no better time than AB 852 right here and right now.

Congratulations again- words can't really convey how excited I am that you are our secretary of state!

Respectfully yours,  
Greg Christopher

P.S. I am including a couple pictures from the meeting last year. I am the one to your left by the fireplace. The second picture includes my daughter. Bringing her to the meeting gave me a great opportunity to explain to her the importance of your efforts, and by so doing renew my own excitement about what repairing electronic voting means for all of us.

