



## OPEN VOTING CONSORTIUM

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**September 14, 2007**

The Honorable Anna G. Eshoo  
Member, United States House of Representatives  
Washington, D.C.  
*Sent via fax and email*

Dear Congresswoman Eshoo:

Thank you very much for your letter to me dated September 5<sup>th</sup>, in which you pledge "to continue to support efforts to expand open source technology, ensuring that the government utilizes open source systems where feasible." This is a significant statement, and I appreciate your leadership. I note that this is a generalized statement about open source systems, not just voting systems.

You also discuss H.R. 811 in your letter, and I have a few additional comments about that. I received a phone call three weeks ago today from Congressman Rush Holt. It was a privilege to be able to convey my thoughts directly to Congressman Holt. Your discussions with him may have had something to do with that phone call. If so, I thank you for that as well.

The current version of this bill calls for "grants for research on development of election-dedicated voting system software." I mentioned to Congressman Holt that we would like to see that any technology resulting from this federally funded research and development is made available with a standard open source license such as the General Public License (GPL). He replied, "that's a possibility."

There are other issues with this proposed research. It only deals with voting system software: it does not mention hardware. So the first question: *software for what hardware?*

Voting system hardware currently in use consists of proprietary designs owned by voting system vendors. It would be difficult – probably not feasible – to pick one, or a few, of these hardware designs as platform(s) for this new software. Furthermore, most existing hardware designs are already obsolete or will be obsolete in the near future.

For more than six years, I have publicly advocated using open source software along with commonly available hardware (Commercial-Off-The-Shelf, or "COTS," such as PCs, printers, and scanners) for use in voting systems. The Open Voting Solutions system we discussed uses this approach and I endorse that. COTS hardware and open source software will work fine for a precinct based optical scan system. This approach is the least expensive and quickest way to make a good open source voting system available in the near future.

Having said that, I do not think COTS hardware would make the ultimate voting system. For the best possible voting system, we would want public nonproprietary designs for election-dedicated hardware as well as open source software. If we are only going to spend a few million dollars (as H.R. 811 contemplates) on voting system software, the target platforms should be COTS. While COTS will work fine for an interim system (perhaps for the next 5-10 years), the best possible system would have election-dedicated hardware with a design that is public.



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COTS has its advantages but comes with a couple of disadvantages, too. The first issue has to do with the usability for election departments. Storage, handling, and placement at poll sites of hardware for voting that was not designed specifically for the voting application will present some challenges. The other main issue is security. For example, if we agree that we don't want wireless functions in the voting equipment (as H. R. 811 says), we might have to remove or disable that capability in an otherwise suitable COTS component. The fact that the component was designed to work with wireless in the first place opens up security issues. The most secure voting system will be designed from the ground up to have only the functionality needed.

The only reason not to immediately move to developing the ultimate voting machine hardware is cost. It would cost tens of millions (perhaps a hundred million or more) to do it right. No voting system vendor has the resources, and there is not enough profit potential to make it interesting for any private investors. We would like to see the federal government underwrite these development costs, but I am not sure you are ready to do that. Are you?

We need to design new hardware. Here is another problem with H.R. 811. It treats the difference between the electronic ballot printer and the DRE with paper trail to be merely definitional, when they are substantially different in terms of hardware and software architecture.

My main concern with H.R. 811 has to do with the way it (along with HAVA) appears to federalize administration of federal elections. From Article 1 of the US Constitution,

*Section 4. The times, places and manner of holding elections for Senators and Representatives, shall be prescribed in each state by the legislature thereof; but the Congress may at any time by law make or alter such regulations, except as to the places of choosing Senators.*

The key word here is "manner." The Framers clearly wanted states to be substantially in charge of the *manner* in which elections involving federal offices are conducted. The separation of powers feature appears in many places in the Constitution, and we all know this is an important principle. Congress has the authority to "alter such regulations," but the states role is primary and mentioned first. It would be unwise to involve the federal government too much in the administration of federal elections (as in foxes watching chicken houses). Congressman Holt downplayed the federal role, but I believe H.R. 811, as written, would represent a significant shift, from states to federal, in responsibility for administering federal elections.

At our August meeting, it was hard to believe that it had been almost twenty years since I had last seen you in person — working with you on your 1988 congressional campaign. It is nice to know that we can continue the conversation.

I hope you will take these comments into consideration as you help with H.R. 811 and other related legislation. Thank you again, and best wishes.

Sincerely,

Alan Dechert

Cc: Congressman Rush Holt