

COMMENTS FOR THE HOUSE COMMITTEE
ON HOUSE ADMINISTRATION

Elections Subcommittee Hearing on Election Reform: Machines and Software

Delivered by:

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I Am Kelly Pierce the Disability Specialist at the Cook County Illinois State's Attorney's Office and a member of the Accessibility committees of the Cook County Clerk's Office and the Chicago Board of Election commissioners. I have worked on disability related technology and transit policy issues since the early 1990s. This included starting a technology user group for blind persons and consulting with the local transit agency on its audio interface for a new automatic stop announcement system. I have served on the Technology Watch committee of the National Council on Disability, a federal agency that plans and evaluates disability policy and programs. I have worked with major financial institutions including Bank One, J.P. Morgan-Chase, LaSalle Bank, and American Express in creating and developing audio interfaces to automatic teller machines for people with disabilities. More recently for the past two years, I have worked with Sequoia Voting systems and the Cook County Clerk and the Chicago Board of Election Commissioners to develop significant improvements in accessibility to electronic voting machines in Cook County.

I became blind in 1985 at the age of 20 from a rare genetic eye condition, having voted in the 1984 election for the first time. Following my vision loss, I voted with the assistance from others until last year when I voted independently for the first time as a blind person. During those two decades, I endured humiliating and degrading privacy compromises, illiterate poll workers, and arguments in the voting booth. Friends that assisted me sometimes revealed to others who I voted for. Once, a friend challenged my candidate selection and argued with me in the voting booth before casting a vote, for whom I still am not sure. Only once did I seek the assistance of election judges. One of the judges, an elderly woman, had difficulty seeing the print on the ballot and following a line to punch the right hole in the ballot card. The election judge she called over mispronounced most of the names on the ballot to the point many of them needed to be spelled. He also missed parts of the ballot and could barely read several referendum questions.

Last year, this all changed. I was able to vote independently for the first time. It was an exhilarating and awesome experience once again to feel with a high degree of confidence that my election choices would be received and fully counted as those of everyone else in my community. The experience was also highly satisfying. Two years ago today, on March 15, 2005, I reviewed four proposed election systems at the request of local election authorities, including the Cook County clerk. The resulting 100-page report found accessibility barriers with all four voting systems, with some having significant

barriers. In May 2005, the clerk chose the only direct-recording electronic voting machine that had produced a voter-verified paper audit trail in an actual election. While the Sequoia electronic voting system had significant accessibility problems, assurances were provided by the company's Chief Executive Officer to devote resources on dramatically improving access.

The company followed through on its commitment. On June 13, 2005, Sequoia Voting Systems then President and CEO Tracey Graham met with disability leaders and the Cook County Clerk and described the company's substantial commitment to improving the accessibility of the AVC Edge. An audio recording of a voting experience was produced that day following this meeting. The recording and end user experiences with the Sequoia AVC Edge were used to produce a June 30, 2005 report on the audio interface of the machine. Since completion of the report, Sequoia representatives spent more than 100 hours in enhancing and improving the audio script used by the AVC Edge, states a December 2005 memorandum by Sequoia President Jack Blaine. During the past two years, Mr. Blaine has met with disability leaders to learn about access concerns and develop paths for forging solutions. City and county officials and leaders from the disability community spent hundreds of hours conducting usability tests, analyzing the control box, and reviewing the effectiveness of each audio prompt on the machine. Further, Sequoia redesigned its control box for the audio interface. The new control unit included easy to locate volume control buttons and a switch that increased or decreased the rate of speech in the audio recording. The new control unit also enabled those who could not use their hands to vote to plug in a sip and puff device so the ballot could be voted completely from someone's assistive technology.

Additionally, Sequoia produced numerous changes for the November 2006 election. In August 2006, Sequoia representatives met with the Cook County Clerk, the Executive Director of the Chicago Board of Election Commissioners and leaders in the disability community to demonstrate the new and enhanced accessibility features of the Sequoia Edge II Plus voting machine, which was used in the November 2006 election. The Sequoia Edge II Plus replaced the AVC Edge used in the March primary election. The audio interface now includes navigational prompts on the contest menu and an interactive ballot review mode so blind and disabled voters can exit the review mode at a particular contest and change their selection as sighted voters can. The now accessible ballot review will largely resolve the problems that were described in my report. The company may refine the accessibility of its ballot review, further increasing the accessibility and usability of this newly accessible function. The re-designed touch screen on the Edge II Plus has legs that can be adjusted to different levels for various wheelchair heights. For the first time, people who have low vision will be able to view the ballot using a zoom function which magnifies the type up to 400 percent its normal size as well as view the ballot at a high color contrast. Sequoia has re-designed its audio control unit yet again. The buttons are concave and recessed so those with head or mouth sticks and pointing devices can operate the machine independently. There are now also separate large plug-in "buddy buttons" for people with limited dexterity to use. I understand that many of our

improvements could easily be retrofitted to other Sequoia machines in the rest of the country.

This rapid and remarkable increase in accessibility did not happen by accident. It came about through a deliberate process when a government purchaser, as its largest customer, put forward clear access expectations. Also, Cook County Clerk David Orr and Lance Gough, the Executive Director of the Chicago Board of Elections became personally involved in the process, actively pursuing effective accessibility as one of their important goals. Further, company management from the CEO on down became focused on access goals and talented and seasoned disability leaders along with company representatives devoted considerable time and resources innovating and creating powerful solutions. When representatives of industry, government and the disability community work together cooperatively as partners in using technology to solve accessibility problems, the inconceivable becomes possible enabling a new level of independence never before achieved.

Finally, I wish to comment upon legislation before this sub-committee, HR811 the Voter Confidence and Increased Accessibility Act of 2007. From my reading of this bill, it would require voting machines that produce paper ballots that can be hand counted. Further, the completed paper ballot would need to be able to be read back in audio to the voter with a disability. While the Sequoia electronic voting system has a voter verified paper audit trail, it does not have this functionality. This means that all of our new voting machines would need to be discarded along with the loss of time, energy, pride, and dreams of people with disabilities, and those in industry and government who created a highly effective access solution. Currently, there is only one voting machine that meets the requirements in the bill and this machine has access issues and barriers of its own. Access with technology for people with disabilities is not a simple either/or proposition. A wide range exists from the highly accessible to those devices that provide some minimal access features. The tremendous access achieved with our voting system should not be disregarded in an effort to further improve upon voting system improvement.

I am passionately looking forward to voting in next year's presidential election. It will be the first time me and other blind and disabled people can cast a vote for president privately and independently without needing to reveal the choice to friends, family or community members.