CLEMSON UNIVERSITY

Testimony for the Election Assistance Commission Hearing on
Disability Access and Voting Technologies
July 13, 2009

I would like to contribute written testimony about the extensive research and development we have done in my Human Centered Computing research lab on secure, accessible voting technologies. Our research is commonly known as the Prime III voting system project, http://www.PrimeVotingSystem.org. Prime III is a secure, accessible proof of concept voting system. The goal in our research was to develop a prototype system that employs universal design principles such that all citizens regardless of ability or disability could vote on the same machine. If such a design could be prototyped, it would have immediate benefits. For example, poll worker training would be reduced because there's only 1 type of voting machine in each precinct. Security would be enhanced because hackers could not target a specific group given everyone is using the same machine. Prime III accomplishes these goals by using a multimodal user interface that allows people to vote using their voice and/or touch. As such, people that can't hear, see, and those with physical disabilities, e.g. no arms, or multiple disabilities can all privately and independently casts their ballots on the Prime III prototype. To our knowledge, there is no other voting system or technology in the world more accessible than Prime III. We have conducted numerous studies at the Alabama Institute for the Deaf and Blind (AIDB), we have conducted studies with senior citizens, college students and members from the population at large with Prime III. The findings from our studies suggest Prime III is easy to use, independent of disability. Furthermore, we have conducted organizational elections with Prime III for the National Council on Independent Living (NCIL), Black Data Processing Association (BDPA), National Society of Black Engineers (NSBE) and several mock elections as well. Since 2003, Prime III has gone through numerous development iterations and countless improvements guided by the experiences and feedback of more than 10,000 users during research studies, mock elections, and organizational elections. To date, Prime III implements an accessible voter-verified paper trail that is secure and defends against human errors that were observed in the 2008 Minnesota Senate race with optical scan technology. As the nation moves towards secure, accessible voting, there will be individuals that claim a secure universally designed system is

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impossible. Our research suggest otherwise. Furthermore, our research has found different models for transferring universally designed systems into practice at a reduced cost. I would strongly encourage you to support additional research and development efforts in the area of secure, universally designed technologies. Through years of research, testing, and redesigning we have demonstrated the possibilities for such systems with Prime III. Research needs to be expanded in this area to reach more people with the goal of developing technology transfer opportunities.

Sincerely,

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