# Is smartphone technology the future of US elections?

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With more and more Americans upgrading to smartphones, and as smartphone capabilities continue to improve, even the U.S. government is considering innovative ways to harness this advancing technology. Human factors/ergonomics researchers have evaluated the potential benefits of using smartphones to enable online voting in future U.S. elections and will present their findings at the upcoming HFES 55th Annual Meeting in Las Vegas, Nevada.

The 2000 presidential election debacle in Florida became a national embarrassment, prompting many U.S. election officials to opt for more technologically advanced voter systems. Congress passed the Help America Vote Act (HAVA) in 2002, which aimed, in part, to increase usability and promote accurate election results through the creation and distribution of electronic voting systems. Little research was completed to determine the efficiency of the new systems, however, which has caused additional usability issues. This gap has led some to speculate that mobile voting may prove to be the wave of the future for voters.

In their upcoming Annual Meeting presentation, "Voting on a Smartphone: Evaluating the Usability of an Optimized Voting System for Handheld Mobile Devices," Bryan Campbell, Chad Tossell, Michael Byrne, and Philip Kortum asked more than 50 men and women ranging in age from 18 to 68, with and without smartphone experience, to vote on two types of systems: a custom-built mobile Web application, and either a traditional electronic voting system or a paper ballot. The researchers found that participants who own and use smartphones

completed the voting task more accurately than did those without smartphone experience, indicating the need to design mobile voting systems—including content for such systems—to accommodate inexperienced voters' mental model to increase usability, effectiveness, and accuracy.

The authors note some potential benefits of implementing smartphone technology for voters: "Mobile voting carries the potential to increase voter participation, reduce election administration costs, and allow voters to interact with familiar technology. In the near term, remote voting should not be considered a viable option for elections. Over the long term, however, with the support of the human factors/ergonomics and computer science communities, mobile voting can be a viable—and desirable—means of conducting elections."

Congress has given preliminary approval for remote electronic voting to replace slow and unreliable postal ballots for U.S. soldiers stationed overseas. "As a result," say the authors, "some form of Internet voting seems inevitable, and it follows then that smartphones and other Internet-capable mobile technologies will likely play a key role."

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