

COURIER-JOURNAL ASKS READERS TO VOTE ONLINE ON THE MERITS OF VOTING ONLINE...AND GETS HACKED

As Legislature Considers Bill to Allow Electronic Voting for Military, Computer Scientists Again Show the Dangers

Louisville, KY—Should we take an online vote on the definition of “irony”?

As the Kentucky legislature considers a bill that would permit overseas military to vote using the Internet, the Louisville *Courier-Journal* newspaper opened up an online poll on March 21 on the question “Should overseas U.S. military personnel be allowed to vote via the Internet?” It got hacked.

“We shouldn’t vote for our elected officials the same way we vote for ‘American Idol,’” said Dr. Duncan Buell, a computer science professor at the University of South Carolina who oversaw the hack by two of his students. “Our democracy isn’t compromised if we get the wrong winner in a national singing contest, but there are tremendous consequences if we use an insecure method of voting for President and get the wrong result.”

Buell and his team became aware of the online poll at 1:30 PM on March 21, at which point the poll was running strongly in favor of allowing voting over the Internet. By 10:00pm, after Buell and his team had collectively cast about 9000 votes in the poll, the votes were running 80% against Internet voting and 10% in favor.

Dr. Buell is active in research on the analysis of data from election systems and has been a strong critic of the idea of voting over the Internet, arguing that no computer on the net is really safe from hacking and that the likelihood of being hacked goes up with the “fatness” of the target to be hacked, making an attack on a major election done over the Internet a virtual certainty.

“If it’s this easy to corrupt something that would influence public policy, then maybe it’s just a bad idea to begin with. Computer security is really hard, and we should not be voting on the Internet until security becomes easy. We are nowhere close to that now,” continued Buell.

So how did they do it?

Dr. Buell forwarded the link to the *Courier-Journal’s* online poll to faculty and students in the afternoon. It had been determined by other election experts that although the website and poll prevented a naive attempt to vote more than once, it did not prevent a slightly more sophisticated use of “private browsing” that would permit voting as often as one wanted, and probably would not prevent a bot from voting continuously.

Dr. Buell then asked if any of the students would be capable of scripting a bot quickly. The idea of casting fraudulent votes over the Internet, for a newspaper poll about the security of casting votes over the Internet, just seemed too enticing not to attempt. And two Computer Science students, December 2012 graduate Chase Daigle and May 2013 graduate Geoff Marsi, came up with two different approaches for casting ballots continuously in the *Courier-Journal* poll. Each of the two students spent about 30 minutes coming up with the approach and then writing the scripts for casting as many votes as desired. By the morning of March 22, the various bots had cast more than 50,000 votes.

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