



OPINION OCT 06, 2018

How you know you can trust Brazil's electronic voting system

BY MICHAEL MOHALLEM AND PEDRO CAMPOS

The electronic voting system is under attack

Jair Bolsonaro, the [frontrunner](#) of Brazil's presidential race, has cast doubt over the integrity of Brazil's electronic voting system. And he's not the first to do so. Since its implementation two decades ago, Brazil's electronic voting system has been the subject of much debate about its possible vulnerability to hacker attacks, as well as a perceived lack of transparency in the counting of ballots.

In 2014, the presidential race was decided by the narrowest margin ever recorded, with 51.64 percent of voters going to Workers' Party candidate Dilma Rousseff against 48.36 percent to Aécio Neves, of the Brazilian Social Democracy Party. The proximity of the result led the defeated party to request a recount from the Superior Electoral Court, "so that the credibility of the electoral process wouldn't be called into question." The absence of printed ballots to match the electronic votes is, time and time again, mentioned as being the system's fundamental [vulnerability](#). Paper ballots, after all, would allow for a physical recount of the votes.

This deep mistrust in the system led Congress to include a provision in 2015's political reform which established that voters would print their ballots in addition to using the electronic voting machine. The electoral courts rejected this rule, however, as they adjudged it would compromise the secrecy of the vote, not to mention increase the costs of the election.

But is it possible to preserve the secrecy of the ballot and, at the same time, give voters some mechanisms of control?

One underused technological tool could help to earn the trust of more suspicious parties, voters, and social movements. We're talking about printing a QR Code on the printouts of the electronic ballots, which would allow quick access to the results for anyone with a smartphone. By way of an app, users could see a centralized, unofficial, real-time count. A parallel vote count, if you will.

The app could be used after 5 pm, when the polling stations are closed and ballot box receipts are printed out. This document registers how many votes each candidate got in that polling station. Since the 2016 municipal elections, every ballot printout has its own QR Code, operating as a sort of barcode. A multitude of apps could read the code and send the data to a server that, in real time, would provide a parallel recount.

But the use of QR Codes in 2016 didn't go as planned. For instance, by way of the *Apura Fácil* (Easy Count) app, only 0.5 percent of ballots in Porto Alegre were recounted. In Rio de Janeiro, only 0.13 percent – and only 0.17 percent in São Paulo.

The digitalization of the electoral process is becoming more and more modern in Brazil. Besides electronic voting machines, the country also takes voters' biometric data. There is also an electronic version of the voting registration, which allows voters to replace physical documents with an app.

But the lack of paper in the system opens up space for conspiracy theories and can lead candidates into irresponsibly challenging results, even when they are not favorable.

A legion of [observers](#) is better than an army of conspiracists. On election day, all they need is motivation – and an app to read a QR Code.

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