

Research Summary

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Many countries in recent years are introducing computers to conduct some part, or all, of election processes because it is cost effective, accessible to disabled voters, faster result, convenient, etc. In addition, some voting methods are very complex to count by hand, e.g., single transferable vote (STV) used in Australian Senate elections. Moreover, several cantons in Switzerland use an electronic voting system developed by SwissPost, India uses electronic voting machines, many provinces in Canada use computer ballot counting (vote tabulators), etc. However, many of these software programs are bug-ridden, demonstrated by various security researchers, and my research addresses (eliminates) the problem of bugs in software programs used in elections.