

Title: An End-to-End e-Election System Based on Multimodal Identification and Authentication

Author(s): Ayo C. K

Outlet: Proceedings of the 6th International Conferences on e-Government (ICEG, 2010), pp. 10-17.

Abstract: The spate and intensity of controversies and irregularities that usually trail the conduct of elections in most developing nations of the world are national albatrosses that must be removed, as they clog the wheel of true development in any nation. Concerted efforts were made through the introduction of e-Voting as a panacea for eliminating these development-inhibiting influences and achieving reliable democratic governance, but without much success. In any case, e-voting is just one of the components of an electoral system, and adopting a holistic approach to the development of an e-election system, appears imperative for an endearing solution to the debilitating pre-, contemporaneous and post- election events. In the particular case of the Federal Republic of Nigeria, the challenges of the electoral system were observed at four (4) major phases: registration of voters, political parties and candidates, and the security of election data; voting (voter identification and authentication, and ballot casting); ballot tallying; and the transmission of votes from the polling booth to the various collation centres. This paper presents an end-to-end e-Election system, covering the aforementioned areas with adequate security measures based on a multimodal identification and authentication system, and cryptography.