



SPC: Special Conference

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Issue: Exploring the use and misuse of technology and digital tools in elections

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Committee: Special Conference (SPC)
Issue: Exploring the use and misuse of technology and digital tools in elections
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I. Introduction

Technology has integrated into our daily lives and we can see it develop in different fields. People engage in different areas through the use of technology. History has shown that improvements in technology have helped people in many ways by making easier to communicate, transport, and learn, as well as changing the widely accepted conventions.

While the reliability of technological devices remains a question, it is nearly impossible to live without technology. People have trusted technology with their money, private data, location, and business information but is it credible enough to use it in the electoral processes? Malicious use of technology could be seen everywhere around the world. It is no stranger to people that technology could be used for personal or political gains. Technology in elections is being used by some of the countries, whereas some countries banned the use of technology in the electoral process. That is because, while the use of technology might make the process a lot easier and bolster the electoral participation, it also may damage the democracy if there are any errors or any malevolent actions to adjust the outcome of the elections.

The use of technology in politics is broadly seen in political campaigns or for the representation and the advertisement of the works of the government. Expressing significant political points must be done by digital tools as well as mass media to broadcast the ideas of different sides. With the help of technology, reaching out to the public is easier than it has ever been and that is why campaign holders use technology. Demographics are also important to gain information about the voters. Every citizen leaves a trace in the form of data points and they add up to build larger data called big data.

The electoral process is comprised of several steps from registration of voters to the disputes after the elections. Every stage of the process is important to sustain democracy and retain the integrity of the elections. Elections also reinforce the stability and legitimacy of the political community. The outcome of elections is mostly indefinite, despite the surveys, and may determine the future of the political concept of the place it is being held. It is the EMB's (Election Management Body) duty to provide a secure and safe environment for the voters and carry out a fair and free election.



II. Involved Countries and Organizations

Organization for Security and Co-operation in Europe (OSCE)

OSCE focuses on political, militaristic, economic, environmental, etc. issues. The organization carries out activities related to security-related disarmament, building measures for safety, human rights, minorities, democratization, and the environment.

"Recognizing that democratic elections form the basis for legitimate government, the OSCE observes elections throughout its 57 participating States. It also provides technical assistance to improve the legislative and administrative framework for elections in specific countries." (OSCE. What we do, Elections).



Kazakhstan's early parliamentary elections (OSCE)

Estonia

Estonia is the first and only country to adopt online electronic voting on a large scale. The country used the voting system several times and still tries to improve its system. The Estonian citizens use their identity card to log in in order to vote. Several tests have proved that the Estonian voting system is risky since the software is open to malicious software use.

European Union (EU)

The EU is not against electoral technologies. EU is in favor of the use of technology in elections if certain standards such as reliability, protection, auditability, and efficiency are provided. Some questions are still in place since technology may enable certain groups of people to vote but the secrecy and the security of the process remain as an issue.

The Netherlands: Voting machines were used for several years until 2007. They were banned due to security and protection issues and haven't been used since. The committee decided that the country was not going to use electronic voting with machines as well as online voting.

United Nations Electoral Assistance Division (UNEAD)

UNEAD is a division of the UN Department of Political Affairs (UNDPA). "In the days of decolonization, the UN-supervised and observed plebiscites and referenda leading to the creation of new independent states; today, the efforts of the Organization are increasingly focused on providing technical assistance to help



Member States build credible and sustainable national election systems." (The Electoral Knowledge Network, ACE. United Nations Electoral Assistance Division)

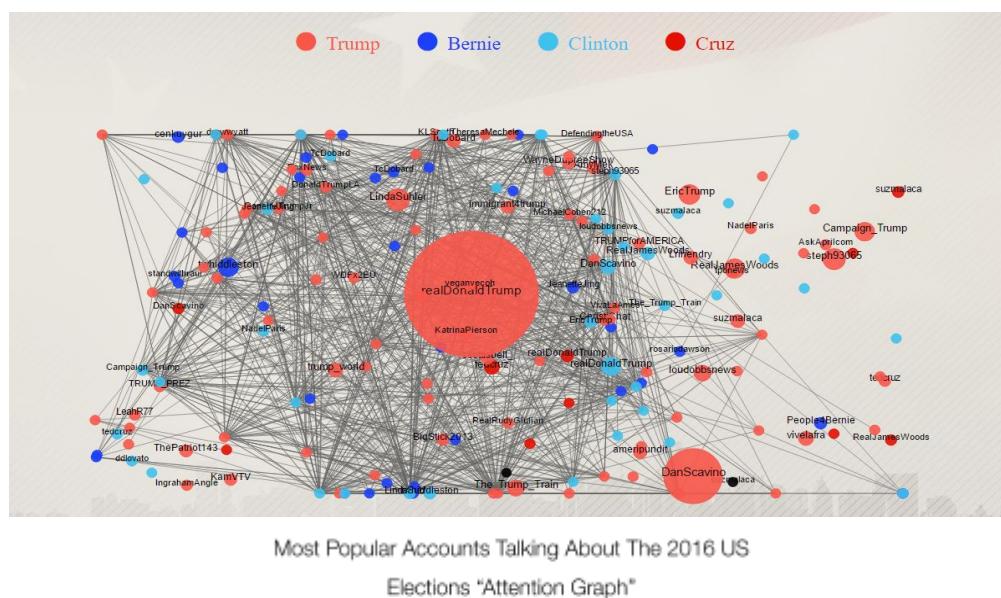
III. Focused Overview of the Issue

Campaigns

Every election has a stage where every side has the chance to introduce their ideas to the public and reflect their purposes. The organized effort is to influence the voters to gain the maximum amount of voters. By reaching out and addressing the public their future goals and intentions, the political parties try to get the most votes. It could be achieved by using different grounds. Newspapers, billboards, television, and the internet are the core media of a political campaign. While these campaigns try to reach out to the voters, they also need to know who the voters are to designate the campaign to take attention.

Big Data

What is Big Data and why and how is it being used in the political campaigns? Big Data is a large collection of data points that are being gathered by the digital traces of voters. Big Data gives information about the preferences, habits, and inclinations of every single voter. A single data point does not have value but if it is assembled, like Big Data does, they may reveal patterns and interests which may be used to design and regulate campaigns. Analyzing the collected data sets are crucial for political parties to direct their propaganda towards the right voters. In that way, they can catch the interest of different voters with less effort since the interests could be revealed by looking at the accumulated data. Big Data allows predictions to be strongly dependable and trusted upon. New slogans and campaign ideas are being created to be targeted toward the voters.





Voter Registration (VR)

Voting registration is crucial to ensure that the eligible people can vote and the people who are not qualified to vote are not voting. It is also essential to make sure the voters only vote once. Voter registration is the most time-consuming part of an electoral process. Getting people to register to vote is inconvenient without the use of technology since automatizing the registration method will cost less time and effort and increase the number of voters. When the registration process is convenient and high quality, then the legitimacy of the elections will further support the idea of democracy and the inclusion of eligible voters.

Periodic List

A periodic list is a list of voters that is developed for a specific electoral process. It is for single use only. The list is updated for every election and the voters on the list can register in two different ways. The first method is state-initiated voter registration, which means the state will go to the residences of the citizens and conduct registrations. The state is responsible for completing the periodic list. The process includes the hiring and training of the staff which will carry out the registrations. The procedure is credible and accurate since the registration officials will be the ones accountable for the registration process. However, the reliability of the process is also dependent on political corruption. Also, intentional misuse of power by the registration officials must be considered as a threat to the process.

The second method is by using voter registration centers established by EMBs (Electoral Management Body) within the state. The number of voter registration centers must be sufficient for the registration process to be convenient for the citizens. The centers will be the locations where the citizens will register to vote. Some precautions may be taken to reach the citizens who will struggle to arrive at the centers. People who live outside the state, IDPs (internally displaced people) and homeless voters might be examples.

Continuous Register

The continuous register is based on a continuous list which progressively changes between electoral processes and includes the eligible voters. The list does not require manual registrations of voters. The continuous list is updated when a citizen becomes eligible to vote. The continuous list requires cooperation between government bodies with the EMBs to constantly update the list. By sharing data, the list will keep refreshing. If the computerized databases are not compatible with each other due to the differences between the types of databases, the continuous list will not be automated properly. It would be hard for nations without citizen identification numbers.



Civil Registry

The civil registry is a list that contains the basic information of citizens and it is obligatory for citizens to report if there are any changes. A voters' list is easier to establish since most data has already been collected and stored. Countries that do not use national citizen identification numbers would find it challenging to create a civil registry with a high level of credibility and accuracy since citizen identification numbers are key elements of storing basic information of citizens.

Online Registration

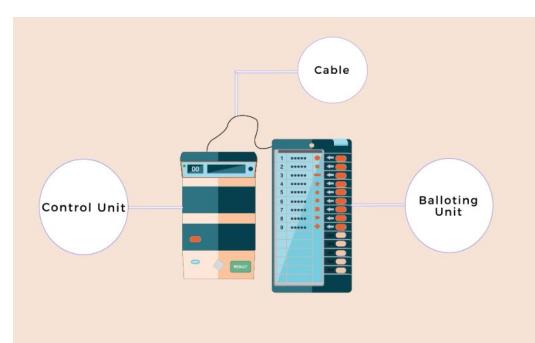
Every state must work on to increase the number of registrations to vote by making it easier for citizens to access and attain. The process of registration might be difficult since reaching out to every citizen to register is not simple. Apart from encouraging the citizens to register, the state must improve the quality of its system of registration. Online registration is a fast way a citizen can become a registered voter if they are eligible to vote. However, most countries use automatic voter registrations which don't require citizens to register manually.

Electronic Voting (E-Voting)

What is e-voting? E-voting is a way of casting or counting votes with the use or help of technology. Like everything does electronic voting has advantages as well as some disadvantages which were why some countries (Finland, Germany, France, The Netherlands, etc.) used electronic voting but discontinued for various reasons. Vote secrecy, data security and not being able to recount the votes are some reasons why the e-voting process was banned or discontinued in some states.

EVMs (Electronic Voting Machine)

EVMs are technologically developed stationary devices where voters can vote electronically. They may also be called DRE (Direct Recording Electronic) voting machines. EVMs are used at supervised polling stations and they are used to cast votes and count them. The EVMs are made of two units. A balloting unit and a control unit. The voter uses the balloting unit to vote by pressing a button. After the voting procedure is done and every voter has voted the authorized staff concludes the voting process. The data obtained by each DRE unit is then transmitted by either computerized means, such as the Internet, cellular or memory record, or manually, by printing the results from each machine and tabulating them.



Electronic Voting Machine Display



Some DRE voting machines will use voter-verifiable paper audit trails (VVPAT). They are papers of verification recognized by the voter if their vote was recorded correctly. The verifiable paper audit trails would be kept in a ballot box in case of a recount. That way the voter can be sure their vote was registered also allowing for a proper and accurate recount.

Internet Voting System

The internet voting system uses the internet to cast votes and count them. The eligible voters will vote mostly in remote and unsupervised environments if the EMBs do not provide access at the polling stations. Internet voting is perceived to provide access to people who may have difficulty in voting at polling stations (persons with disabilities and eligible voters living outside a country etc.). However, internet voting relies on voter identity verification to avoid impersonation. The secrecy of the ballot is in danger considering the voting takes place without authorized personal. Concerns raised regarding hacking since the whole process is done online. Securing the voters' information and the data is essential to get accurate and credible results. Since a recount is not possible, further complaints might result in the change of the method of voting.

Security of Voting

Security in the electoral process is crucial and mustn't be overlooked. Elections are important events that may define the future of where the electoral process is taking place. That is why it is essential to secure the whole procedure with precision. Actions must be taken beforehand to provide safety and security to voters and ensure the protection of the technological tools used in the electoral method.

Physical Security

Physical security is necessary for every form of the electoral process. From paper ballots to EVMs physical security provides a safe environment for an eligible voter to cast their vote. The privacy of the voter is important in every election and it must not be intervened by other people. Physically securing technological devices that play a role in the process will decrease the number of issues and errors. Physical conditions can be divided into two factors. Environmental and natural factors and the second one being the human factor. Taking precautions against environmental circumstances should be considered beforehand for the election process to work smoothly. The possible transportation of the machines, making sure electricity is provided to the machine when it is set up, special security needs for the telecommunication equipment and making sure there is a backup generator, such as UPSs (Uninterruptible Power Supply), are just some concerns an EMB must take into account.

The second factor is the human factor. It may require more complex solutions. People might pose a threat to equipment and devices. Deliberate dangerous behavior towards the physical components can be



reduced by protecting and hiding the maximum amount of devices and cables. The simple and complex devices, wires and equipment should be out of reach to prevent any accidental or intentional interference. Surveillance is another key element to monitor any issue or ensure the safety of technological devices. Security staff must be recruited to make sure only authorized people can access any components.

Data Security

Securing the data is one of the most crucial parts of the electoral process if electronic voting is in use. Data security works on protecting the data from unauthorized use, display or change. The voting data is mostly altered or erased for political gain. It is also considered as an invasion of privacy. Every machine and voting process that is done electronically carries significant risk. The exploitation of personal and collective data after a polling process may cause threats to democracy and confidentiality. When data is exposed, corruption and malicious acts take over the scene.

Cybersecurity, Cyberattacks, and Hacking:

DDoS attacks invade the system with numerous requests from many different locations. Due to limited resources, EMBs typically do not have the capacity to withstand persistent, powerful DDoS attacks without some external assistance. DDoS attacks will always be a threat since they are inherent to the free design of the system. For example, election results reporting can be targeted by a DDoS attack during election night, when the interest of election stakeholders peaks in a very short period of time and the impact of denied service will, therefore, be significant.

If a country is using an online voting system there are two common ways for it to go under attack by malevolent hackers. A citizen's computer could be hacked and the hacker can monitor what is going on the screen. Also, every piece of information typed on the screen could be saved and used later. If a hacker has a computer under control, then it could use the personal information of the computer's owner and use it elsewhere. Another way of breaching is by connecting to several software devices and using them for personal or political gain.

IV. Key Vocabulary

Electoral Management Body (EMB): “An EMB is an organization or body that has the sole purpose of, and is legally responsible for managing some or all of the elements that are essential for the conduct of elections and direct democracy instruments—such as referendums, citizens’ initiatives and recall votes—if those are part of the legal framework.”



(The Electoral Knowledge Network, ACE. What is an Electoral Management Body?)

Passive Voter Registration: “Passive systems the voter register is compiled automatically on the basis of residency or citizenship registers, or some other form of record.” (Ibid., 59.)

When the citizen's age is eligible to vote, or when the voter changes residence, the system registers the voter automatically.

Active Voter Registration: Active voter registration requires eligible citizens to go through a process of registering where they have to apply to be registered voters.

V. Important Events & Chronology

Date	Event
10 December 1948	Declaration of Human Rights - Article 21 mainly supports free and fair elections
1980	First EVM (Electronic Voting Machine) was invented in India by M.B. Haneefa.
25 June 1993	Vienna Declaration and Programme of Action adopted by the World Conference on Human Rights - Request of Governments for the conduct of free and fair elections
27 February 1996	A/RES/50/172: Respect for the principles of national sovereignty and non-interference in the internal affairs of States in their electoral processes
16 October 2005	Estonia became the first country to use e-voting for their 2005 local elections.
17 June 2013	Resolution 353, Council of Europe: Committee of Ministers, Congress post-monitoring and post-observation of elections: Developing political dialogue



17 February 2016

A/RES/70/168: Strengthening the role of the United Nations in enhancing periodic and genuine elections and the promotion of democratization

VI. Past Resolutions and Treaties

[A/RES/70/168: Strengthening the role of the United Nations in enhancing periodic and genuine elections and the promotion of democratization](#), 17 February 2016

[Resolution 353, Council of Europe: Committee of Ministers, Congress post-monitoring and post-observation of elections: Developing political dialogue](#), 17 June 2013

[A/RES/50/172: Respect for the principles of national sovereignty and non-interference in the internal affairs of States in their electoral processes](#), 27 February 1996

VII. Failed Solution Attempts

The concept of the use of technology in electoral processes remains as a major question since various ways of the usage of technology are being piloted. Some countries, such as The Netherlands, Germany, Kazakhstan, banned or discontinued after the trials of electronic systems. Each had a different reason for their denial and discontinuity since states use different softwares, databases, and EVMs. The inequality of the used systems makes it hard to find a failed solution attempt since details of the technological issues and errors are not easy to attain.

VIII. Possible Solutions

One of EMB's duties is to get voters to register for the elections if the system is not automated. Getting the maximum amount of registered voters will increase voter turnout. With more voters, the final outcome of the electoral process will be more communal and conclusive. The issue of non-registration may



be reduced by automating the process or encouraging the eligible citizens to register. Raising the awareness of the public on why and how to register to vote is a step further to getting people register. Educating them on the procedure and the steps of registration might be needed in order to promote registering before the election day because citizens who don't know how to register may cause disorder on the day of the elections since the process is time-consuming.

New ways of registering, voting or casting may be beneficial for the outcome of the long electoral process. Testing new equipment or technologies is a new approach and must be taken into account. Every country must find the right way to ensure and sustain democratic voting. A single service or machine for every member state may or may not be the answer; different aspects must be considered for a successful approach to the issue.

Cryptographic techniques such as a digital signature scheme may be immune from alteration and forgery in the voting results and may lead to significant improvements in the security of the database used in DRE machines. Electronic voting systems should meet security requirements to make the voting process more secure, reliable and confidential. It should be noted that voting systems have inadequate protection that can be easily exposed to attack.

IX. Useful Links

- . [ACE Project: The Electoral Knowledge Network](#)
- . [International Foundation for Electoral Systems: Electronic Voting Machines](#)
- . [Atlantic Council: Democracy Rebooted \(The Future of Technology in Elections\)](#)
- . [European Commission United Nations Development Programme Joint Task Force on Electoral Assistance Thematic Workshop Information \(Technology and Elections Management: Informed Decisions for Sustainable Outcomes\)](#)



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