

Technical Issues of the Recapitulation Information System (Sirekap) in the 2024 Elections: A Justice Perspective

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ABSTRACT

Election is the main pillar of democracy that must take place honestly, transparently, and fairly. In the 2024 General Election, the General Election Commission (KPU) implemented SIREKAP (Recapitulation Information System) to increase efficiency and transparency in the vote recapitulation process. However, its implementation faces various technical challenges that affect the principle of fairness, such as discrepancies between the results of manual calculations and digital systems, gaps in access to technology in remote areas, and the potential for data manipulation. This research uses a normative juridical method with statutory, philosophical, and conceptual approaches to analyze technical and legal issues in the use of SIREKAP. The results show that although SIREKAP aims to improve accuracy and transparency, its legal status is still weak because it is only regulated in KPU Regulations. Therefore, a more comprehensive reconstruction of the electoral system is needed, including strengthening regulations in the law, increasing system security, and educating the public and election organizers to ensure the principle of justice in every stage of the election.

KEYWORDS : Election; Justice; Reconstruction; Sirekap; Technology.

I. INTRODUCTION

Elections are one of the main pillars of a democratic system. Through elections, people have the opportunity to choose their representatives in government, who in turn will make decisions that affect their daily lives. Elections are not just a formality, but a means for people to express their aspirations and hopes for the future. According to research conducted by the International Institute for Democracy and Electoral Assistance (IDEA), transparent and fair elections are key to building public trust in government institutions (International Institute for Democracy and Electoral

Assistance.¹ This trust is crucial, as without it, the legitimacy of the government can suffer, which in turn can lead to social instability.

Based on Law No. 15 of 2011 concerning the Implementation of General Elections, it is stated that "To improve the quality of the implementation of elections that can guarantee the political rights of the community, professional, integrity, capability, and responsible organizers are needed, which are accommodated by the General Election Commission. Furthermore, in article 2 on elections, the organization of elections must be based on the principles of independence, honesty, fairness, legal certainty, orderly, open, proportional, professional, accountable, effective and efficient.² It is further explained in article 353 that voting is carried out based on the principles of making it easier for voters, accuracy in vote counting, and efficiency in organizing elections.³ Thus, its implementation is expected to encourage public participation in supporting clean, honest and fair elections, in line with the spirit of democracy and the local wisdom of the Indonesian nation.⁴

Along with the development of technology, many countries have begun to implement various innovations to improve the electoral process. Information and communication technology (ICT) has become an integral part of modern election administration, including vote counting and voter information dissemination. The use of digital applications and systems is expected to increase efficiency, accuracy and transparency in elections. This is in line with global trends that show that the use of technology can strengthen democracy and increase public participation. In Indonesia, one of the innovations introduced is the Sirekap (Recapitulation Information System) system designed to simplify the real-time vote counting process. This system is expected to be a solution to various problems that often arise in the previous election process.

However, despite its many benefits, the application of this technology is also not free from various challenges and problems that can affect the fairness of the electoral process. One of the main challenges is the digital divide that still exists in various regions, especially in remote areas. This gap can result in unfairness in access to information and community participation. According to a report from the Central Statistics Agency (BPS), there are still around 30% of the population in rural areas who

¹ International Institute for Democracy and Electoral Assistance (IDEA), "Global State of Democracy 2020," IDEA, 2020.

² Undang-Undang Republik Indonesia Nomor 15 Tahun 2011 Tentang Penyelenggara Pemilihan Umum (Lembaran Negara Republik Indonesia Tahun 2011 Nomor 4).

³ NUR ASIA, "DIGITALISASI PENYELENGGARAAN PEMILIHAN UMUM DALAM PERSPEKTIF HUKUM PEMILU" (UNIVERSITAS BORNEO TARAKAN, 2023).

⁴ Petrus Gleko, Agung Suprojo, dan Asih Widi Lestari, "STRATEGI KOMISI PEMILIHAN UMUM DALAM UPAYA MENINGKATKAN PARTISIPASI POLITIK MASYARAKAT PADA PEMILIHAN UMUM KEPALA DAERAH," *Jurnal Ilmu Sosial dan Ilmu Politik* 6, no. 1 (2017).

do not have internet access, which can hinder their ability to participate in elections effectively.⁵

Sirekap is used based on the provisions in KPU Regulation Number 25 of 2023 regarding the voting and vote counting process in General Elections. The definition of Sirekap, as explained in Article 1 Paragraph 2, refers to the "Electronic Recapitulation Information System" which functions as an information technology application to announce vote counting results transparently and as a supporting tool in the process of recapitulating election vote counting results.⁶

Sirekap was introduced by the General Election Commission (KPU) as a measure to increase transparency and accountability in elections. This system allows vote counting to be done digitally, where voting results from each polling station (TPS) can be uploaded directly to the central server. With this system, it is expected that the vote counting process can be carried out more quickly and accurately, so that the public can immediately know the election results without having to wait for days. According to the KPU report, *"the use of Sirekap is expected to speed up the recapitulation process and reduce the possibility of fraud"*.⁷ This is a positive step in increasing public trust in the election process.

Nonetheless, the implementation of Sirekap in the 2024 elections needs to be further reviewed, especially from the perspective of the principle of fairness. Some are concerned that this reliance on technology could lead to new problems, such as the digital divide, potential data leaks, and vulnerability to cyberattacks that could undermine the integrity of elections. In this context, it is important to educate the public about the use of technology in elections, and to ensure that all levels of society have equal access to the information and technology used. This will help create more inclusive and fair elections for all citizens.

Based on the above phenomenon, it is important to analyze how there is an evaluation of the policy and legal certainty related to the use of the sirekap application in the application of the calculation tool for the general election results in 2024 which creates gaps and injustice for people who have given their voting rights, sirekap should be expected to increase efficiency, accuracy, and transparency in elections. Elections have an important value in building a healthy and dynamic democracy.

Indonesian general elections have various polemics, crimes, between violations, various types of irregularities or deviations that cause disputes, fulfilling elements of violations of electoral juridical norms such as fraudulent practices, forgery,

⁵ Badan Pusat Statistik (BPS), "Statistik Pengguna Internet di Indonesia 2021," 2021.

⁶ Komisi Pemilihan Umum (KPU), "Peraturan KPU Nomor 25 Tahun 2023 Tentang Pemungutan dan Penghitungan Suara dalam Pemilihan Umum" (t.t.).

⁷ Komisi Pemilihan Umum (KPU), *Laporan Pemilu 2024 : Inovasi dan Tantangan* (KPU, 2023).

intimidation, vote inflation, and other types of violations.⁸ However, there are still limitations and inaccuracies in reading the results of the election votes contained in the plano paper at the KPPS level, which has led to polemics over public issues and the potential for chaos in setting or changing vote results in the sirekap application system managed by the PPS, PPK, City KPU to the Provincial KPU. So the sirekap application system needs to be studied in depth which will then be used as research with the title "Technical Issues of the Recapitulation Information System (Sirekap) in the 2024 Election: A Justice Perspective".

II. METHODOLOGY

The research method used is normative juridical legal research. Because according to Peter Mahfud Marzuki the type of Legal Research is always normative.⁹ Normative legal research or doctrinal law. Doctrinal legal research is legal research conducted by examining library materials and secondary data with a process for determining legal rules. As well as legal principles, as well as legal doctrines in order to answer the legal issues at hand based on legal science in the sense of the point of view of the layers of legal science. Bambang Sunggono states that "The research carried out is Normative Research, namely research on legal principles".¹⁰ Normative research is also called doctrinal legal research or library research or document study, because it is aimed at written regulations or other legal materials.¹¹ The method of approach in this research used is the *Statute Approach*, *Philosophical Approach*, and *Conceptual Approach*. In conducting this research, the collection and processing of legal materials is carried out by means of literature studies, both in the form of primary law and secondary legal materials in the form of laws and regulations, books, articles, and journals related to the object of research. Then the materials will be inventoried, classified according to the formulation of the problem being analyzed and then systematized for analysis.

The data analysis method is carried out using a qualitative descriptive method. The data is expressed in the form of descriptions and arranged systematically by using deductive logic, which is a way of thinking starting from general things then drawing conclusions that are specific, or can be called general premises to specific premises. After being selected, it is seen that the suitability with the applicable provisions is then concluded so that an overview of the answers to the research "Technical Issues of the Recapitulation Information System (Sirekap) in the 2024 Election: A Justice Perspective" is obtained.

⁸ M Syahrul Borman dkk., "Model For Resolving Election Violations Through Indonesian Election Body and Constitutional Court," *Legality : Jurnal Ilmu Hukum*, 2024.

⁹ Peter Mahfud Marzuki, *Penelitian Hukum* (Jakarta: Kencana, 2013).

¹⁰ Bambang Sunggono, *Metodologi Penelitian Hukum* (Jakarta: Raja Grafindo Persada, 2010).

¹¹ Suratman dan Philips Dilah, *Metodologi Penelitian Hukum* (Bandung: Alfabeta, 2015).

III. THE IMPACT OF ELECTION RESULTS DISCREPANCIES BETWEEN MANUAL AND SHORTHAND CALCULATIONS IN THE PERSPECTIVE OF ELECTORAL JUSTICE

Elections are the main pillar of democracy that reflects the sovereignty of the people in determining the direction of government. Therefore, the implementation of transparent, honest, and fair elections is the main prerequisite for maintaining the legitimacy of the elected government. In the 2024 General Election in Indonesia, SIREKAP (Electronic Recapitulation Information System) was presented as an innovation to improve efficiency and accuracy in vote recapitulation. However, it appears that the results of manual counting at polling stations (TPS) are not always in line with the results produced by SIREKAP. This raises legal challenges and implications for the principles of electoral justice.

Discrepancies between the manual count and SIREKAP can lead to political conflict, especially regarding public confidence in the election results and the organizing body. These discrepancies could potentially lead to disputes in the Constitutional Court, which would not only strain state resources but could also prolong the process of determining election results, disrupting the transition of government. Such a situation could undermine the integrity of the electoral process and threaten national political stability.¹²

From a legal perspective, this issue highlights the validity of the evidence used. Law No. 7/2017 on Elections stipulates, "That manual counting at polling stations is the legal basis for determining election results". However, the existence of SIREKAP, which is designed to speed up the process and improve the accuracy of election results, has raised debates about its legal status and role. The Constitutional Court has often emphasized the importance of legality and the precautionary principle in determining the validity of election results, especially when technology is a central element in the process.¹³

For election participants, both individuals and political parties, this discrepancy in results can cause losses and cast doubt on the objectivity and accuracy of SIREKAP. In this context, the issue of substantive justice is highlighted: does the technology truly represent the will of the people, or does it open up opportunities for new injustices due to potential technical errors or data manipulation.¹⁴

¹² Budiarto dan Agus, *Transparansi dalam Sistem Pemilu Elektronik* (Jakarta: Gramedia Pustaka Utama, 2020).

¹³ Suryono dan Ahmad, "Tinjauan Yuridis terhadap Inovasi Teknologi dalam Pemilu," *Jurnal Hukum dan Demokrasi*, 15, 3 (t.t.): 45–59.

¹⁴ Prasetyo dan Wahyu, "Peran Mahkamah Konstitusi dalam Penyelesaian Sengketa Pemilu.," *Indonesian Constitutional Review*, 10, 1 (2022): 80–92.

Technologically, SIREKAP is expected to be an instrument that supports transparency, not create new problems. However, if this technology fails to meet the expected accuracy standards, then the responsibility of election organizers to ensure its validity becomes a crucial issue. Strengthening the system testing process before widespread implementation and conducting independent audits of SIREKAP can be mitigation measures to ensure that the system is in line with legal and technical standards.¹⁵

A further impact of discrepancies in election results is the weakening of the legitimacy of the elected government, potentially exacerbating political polarization in society. When trust in electoral integrity declines, this can affect decision-making processes at the government level, which in turn hampers national development.¹⁶

In order to strengthen a healthy democracy, discrepancies in results between manual calculations and SIREKAP need to be handled in a transparent and accountable manner. Public involvement in monitoring the vote recapitulation process remains an important element to maintain public trust. The use of technology in elections must comply with legal principles without overriding the importance of manual supervision as a control mechanism.

Policy recommendations that can be taken include harmonizing regulations related to the legal status of SIREKAP, preparing comprehensive technical guidelines for election administrators, and increasing the capacity of human resources who manage the system. These steps are necessary to ensure that technology truly functions as a solution, not as a source of problems.¹⁷

The discrepancy between the results of the manual calculation and SIREKAP emphasizes the importance of the precautionary principle in any electoral innovation. Elections are not merely an administrative process, but a symbol of the people's trust in democracy. Therefore, ensuring electoral justice is a shared responsibility to respect every voice of the people and maintain the legitimacy of an equitable democracy.

IV. RECONSTRUCTION OF AN EFFICIENT ELECTION SYSTEM MODEL FOR FUTURE USE OF THE SIREKAP SYSTEM

The implementation of the state based on democratic principles in Indonesia began after the fall of the new order authoritarian regime led by President Soeharto.

¹⁵ Lestari dan Dina, "Efektivitas SIREKAP dalam Mendukung Pemilu yang Adil," *Journal of Electoral Studies*, 8, 2023, 2.

¹⁶ Wijaya dan Ratna, *Teknologi dan Demokrasi: Tantangan Hukum di Era Digital*, 8 2 (Surabaya: Airlangga University Press, 2019).

¹⁷ Raharjo dan Bambang, "Analisis Validitas Alat Bukti Elektronik dalam Pemilu," *Jurnal Teknologi Hukum*, 12, 4 (2023): 67–68.

Constitutionally, Article 1 paragraph (2) of the 1945 Constitution of the Republic of Indonesia (UD NKRI 1945) which states "*That Sovereignty is in the hands of the people and shall be exercised according to the Constitution.*" becomes the constitutional basis in carrying out state administration through active citizen involvement. One of the concrete forms of people's involvement in state administration is through the General Election Process (Pemilu), which is a form of giving the aspirations and mandates of the people to their representatives who will occupy the legislative branch and the executive branch.¹⁸

The implementation of elections in the contemporary era has evolved from mere technical issues of organization to focus on the demands for accuracy of results as a form of implementation of substantial democracy. In this case, the election system designed must reflect a comprehensive integration, where every aspect of the election is interrelated and cannot be separated from one another. Election practices that only focus on two ceremonial elements, namely the voting process and vote counting as a symbol of procedural democracy, are now considered less relevant amid the rapid development of information technology.

However, changes or reforms to the electoral system that are considered important will lose their essence if they are not supported by quality and clearly measurable results. Such conditions can set a bad precedent for the level of public trust in the democratic process. The main factors that affect public trust include the level of transparency, accuracy and accessibility of election results. These three indicators are key in building trust and legitimacy of election results amidst the challenges of the times.

Therefore, the General Election Commission of the Republic of Indonesia (KPU RI) applies digital technology in the implementation of general elections through the Electronic Recapitulation Information System (SIREKAP), as stipulated in Article 1 Point 56 (KPU Regulation No. 25 of 2023 concerning Voting and Vote Counting in Elections). SIREKAP is an information technology-based application designed to publish vote counting results, facilitate the vote recapitulation process, and function as a tool in the implementation of the recapitulation stage of election results.¹⁹

However, the use of SIREKAP in elections faces a number of challenges, particularly with regard to data security, transparency and the integrity of the electoral process. One of the main issues is vulnerability to threats to vote data security. Given that election data is stored and processed digitally, there is a high risk

¹⁸ Mario Nurkamiden, "SiRekap : Tantangan dan Potensi Kekeliruan Proses Rekapitulasi Pemilu Serentak di Indonesia," t.t.

¹⁹ Komisi Pemilihan Umum (KPU), Peraturan KPU Nomor 25 Tahun 2023 Tentang Pemungutan dan Penghitungan Suara dalam Pemilihan Umum.

of cyberattacks or data manipulation that could threaten the validity of election results. Potential fraud, such as vote manipulation or the addition of false vote data, can occur if the SIREKAP system is not equipped with strong security protocols and adequate automated protection mechanisms or automatic blocking systems.

In addition, the risk of voter personal data leakage also needs to be considered, which can threaten privacy and public trust in the electoral process.²⁰ Therefore, strategic and planned steps are needed to strengthen SIREKAP's security system. This includes implementing reliable data encryption technology, strictly monitoring access to the system to prevent misuse, and organizing in-depth training for election officials so that they have sufficient competence to effectively manage and protect vote data.

Law Number 7 Year 2017 concerning General Elections in, Article 167 Paragraph 4, only regulates related points (i) Voting and vote counting (j) Determination of election results, and Paragraph 8: Further provisions regarding the details of the stages of organizing the election as referred to in paragraph (4) and voting as referred to in paragraph (3) and paragraph (5) shall be regulated by KPU Regulation,²¹ So that in this article there is still a void and there is no legal certainty of specific affirmation of the application of technology-based regulations, namely, SIREKAP. Meanwhile, the General Election Commission Regulation number 25 of 2023 "Regarding Voting and Vote Counting in General Elections in Article 1 Paragraph 56 specifically regulates, *"That the Electronic Recapitulation Information System, hereinafter referred to as Sirekap, is an information technology-based application device as a means of publishing the results of the vote count and the process of recapitulating the results of the vote count as well as a tool in the implementation of the recapitulation of the results of the Election Vote Count."* Article 58 paragraph 2 reads, *"That the signed form as referred to in paragraph (1) is made in the form of an Electronic Document using Sirekap."*²²

As well as the affirmation of SIREKAP as a vote counting recapitulation tool as a technical implementation system for voting, counting, and recapitulating votes in the 2024 Election which is summarized in the SIREKAP application in article 63, namely, *"That Electronic Documents as referred to in Article 58 paragraph (3) are used for publication purposes and vote counting recapitulation tools."* Until, the General Election Commission Decree Number 115 of 2024 concerning the Determination of the Electronic Recapitulation Information System Application, as a Special Application of the General Election Commission in which, the Electronic Recapitulation Information System Application or abbreviated as SIREKAP is a special platform that serves as a

²⁰ Ica Angger Pradesa, "ANALISIS PENGGUNAAN SISTEM REKAPITULASI SUARA (SIREKAP) DALAM MENGHADAPI PROBLEMATIKA PEMILU 2024," *Open Access* 03, no. 04 (2024).

²¹ Undang-Undang Nomor 07 Tahun 2017 tentang Pemilihan Umum (Lembaran Negara Republik Indonesia Tahun 2017 Nomor 116).

²² Komisi Pemilihan Umum (KPU), Peraturan KPU Nomor 25 Tahun 2023 Tentang Pemungutan dan Penghitungan Suara dalam Pemilihan Umum.

medium for publication of vote counting results and vote recapitulation processes. In addition, SIREKAP is also used as a tool in the implementation of vote recapitulation during the General Election.

So that there is a gap in legal certainty regarding the implementation of the application of regulations on SIREKAP in every election and regional head election will wait for information from the provisions of the results of the General Election Commission meeting by issuing a circular letter of the General Election Commission Decree in determining the use of the SIREKAP application. Because SIREKAP is understood as a vote counting recapitulation tool as a technical implementation system for the implementation of voting, counting and recapitulation of votes as well as being intended as a means of publishing election results to the public in the 2024 Election. As Member of Bawaslu Fritz Edward Siregar in a press conference at the Bawaslu Media Center room described interpreting the scope and limits of the phrase tools with two points of view, namely:

"First, whether Sirekap is a tool to support the ease for the KPU to carry out the mechanism of recapitulation of election vote counting results, so that Sirekap becomes part of the unity of the process."

"Second, is Sirekap a tool to support easy access for the public to the publication of recapitulation results so that Sirekap is a publication technology system that is not part of the unity of the process?"²³

To overcome this problem, reconstruction and redesign of an efficient election system model in the use of SIREKAP in the future as well as reform of legal certainty regarding the application of SIREKAP as a legal product of the General Election Commission as a result of the vote counting and vote recapitulation process in the election as well as the implementation of tiered recapitulation of voting results and publication of vote recapitulation results called the Electronic Recapitulation Information System, abbreviated as SIREKAP.

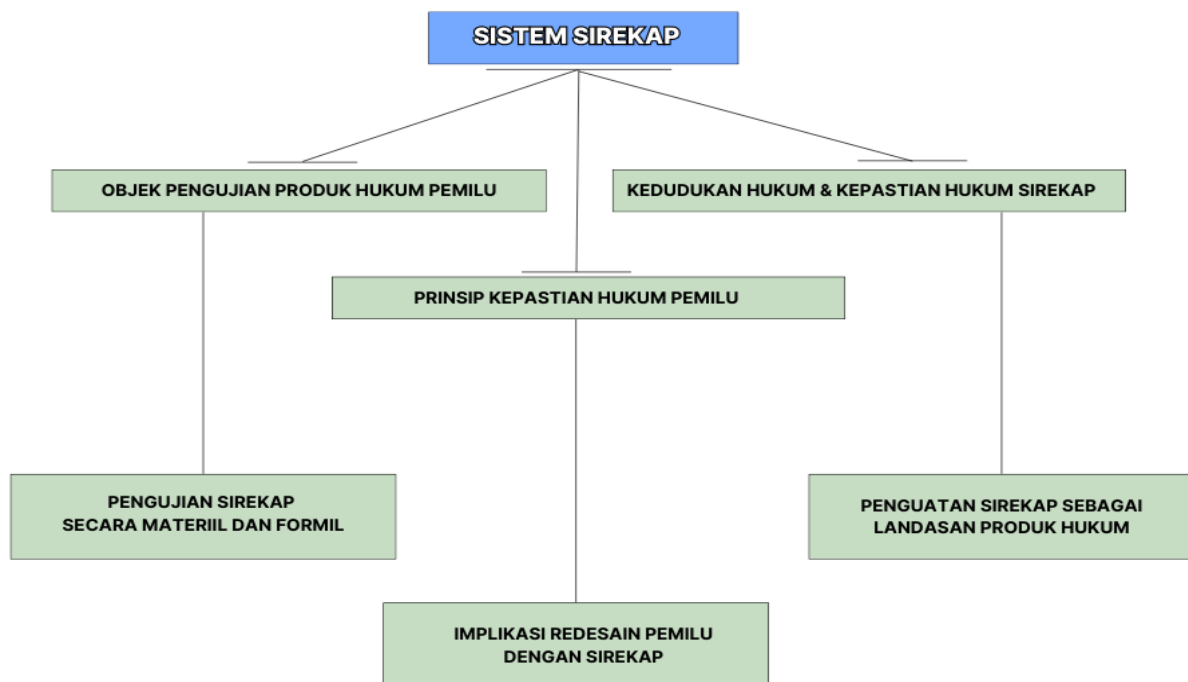
Therefore, a more comprehensive reconstruction of the electoral system is needed as well as material and formal testing related to the legal condification of the legal products of calculation and voting and recapitulation in general elections, especially SIREKAP, which is the basis for the main legal product as a tiered calculation and collection at the TPS level to the KPU RI level, not merely as an auxiliary tool or publication tool for election results. The reconstruction of the electoral system aims to :

²³ Reyn Gloria dan Ranap THS, "Tentang Sirekap, Bawaslu Serukan KPU Segera Siapkan Rekapitulasi Manual," Bawaslu, 2020, <<https://www.bawaslu.go.id/id/berita/tentang-sirekap-bawaslu-serukan-kpu-segera-siapkan-rekapitulasi-manual>>dikunjungi pada tanggal 05 januari 2025.

- a. Strengthen legal legitimacy in the electoral process. In particular, in vote counting, voting and recapitulation.
- b. Improve efficiency and transparency by utilizing technology as an integral part of the electoral mechanism.
- c. Align electoral regulations with the evolving needs of society, technology and democratic principles.
- d. Eliminate the potential for multiple interpretations of the use of shingles as a tool by establishing it as a system that has a clear legal foundation (the foundation of the main legal product, not a tool).

Material testing is a legal mechanism that aims to assess the suitability of a statutory regulation with higher norms in the legal hierarchy. This process is a concrete manifestation of the "*principle of checks and balances*" in the legal system, to ensure that every applicable regulation does not conflict with the constitution or the rules above it. Formal testing is testing the process of forming laws and other matters that do not include material testing. According to **Sidharta**, "*The formal test must not only assess the visible process, but must also be able to detect the line of reasoning taken by the legislature.*"²⁴

According to Saldi Isra's view, "As stipulated in Article 5 paragraph (1) and Article 20 of the 1945 Constitution, the Indonesian legislative system reflects systematic stages in the *law-making process*. The process includes several series of activities," namely: (1) initiative in the submission of a draft law; (2) discussion of the draft law; (3) approval of the draft law; (4) formal ratification of the draft law into law;



²⁴ Himawan Estu Bagijo, *Negara Hukum & Mahkamah Konstitusi "Perwujudan Negara Hukum yang Demokratis Melalui Wewenang Mahkamah Konstitusi dalam Pengujian Undang-Undang* (Yogyakarta: LaksBang Grafika, 2014).

and (5) promulgation of the law into the State Gazette to give it legal force." So that from the description of the discussion above, the researcher conceptualizes a scheme for reconstructing an efficient electoral system model for the use of the sirekap system in future elections.²⁵

Image. 1.1. Schematic Analysys of the Reconstruction of the Concept of the Sirekap
1. Object of Election Law Product Testing

Legal testing of electoral legal products includes aspects of vote counting and recapitulation regulated in Law Number 7/2017 on Elections Article 167 Paragraph 4, which only regulates related points (i) Voting and vote counting (j) Determination of election results and Paragraph 8: Further provisions regarding the details of the stages of organizing the election as referred to in paragraph (4) and voting as referred to in paragraph (3) and paragraph (5) shall be regulated by KPU Regulation.²⁶ Meanwhile, General Election Commission Regulation number 25 of 2023" Regarding Voting and Vote Counting in General Elections in, Article 1 Paragraph 56 specifically regulates that, "*The Electronic Recapitulation Information System, hereinafter referred to as Sirekap, is an information technology-based application device as a means of publishing the results of the vote count and the process of recapitulating the results of the vote count as well as a tool in the implementation of the recapitulation of the results of the Election Vote Count.*" Article 58 paragraph 2 as it reads, "*That the signed form as referred to in paragraph (1) is made in the form of an Electronic Document using Sirekap.*".²⁷ So specifically, this election reconstruction focuses on :

- a) Provisions regarding the voting mechanism at polling stations (TPS) still use the Plano Form Model C-General KWK manually.
- b) Tiered arrangements related to vote counting and recapitulation up to the KPU level regarding the harmonization of the legitimacy of the application of Sirekap in Law Number 7 of 2017 concerning Elections with the General Election Commission Regulation Number 25 of 2023 concerning Voting and Vote Counting in General Elections.
- c) The legal status of SIREKAP, which is currently a counting tool but has become a mandatory system provision in elections. PKPU as the legal basis for SIREKAP does not provide strong enough legitimacy because PKPU is a technical level regulation, not a universally binding law.

This test aims to ensure that all legal norms are consistent with the '1945 Constitution', particularly Article 22E paragraph (1) which states, "*That general*

²⁵ Idul Rishan, "Konsep Pengujian Formil Undang-Undang di Mahkamah Konstitusi," *Jurnal Konstitusi* 18, no. 1 (2021): 6.

²⁶ Undang-Undang Nomor 07 Tahun 2017 tentang Pemilihan Umum (Lembaran Negara Republik Indonesia Tahun 2017 Nomor 116).

²⁷ Komisi Pemilihan Umum (KPU), Peraturan KPU Nomor 25 Tahun 2023 Tentang Pemungutan dan Penghitungan Suara dalam Pemilihan Umum.

elections shall be held directly, generally, freely, secretly, honestly, fairly every five years." This article emphasizes the principle of democracy in elections. As well as following the regulatory process of testing based on Law Number 12 of 2011 concerning the Formation of Legislation

2. Legal Position and Legal Certainty of Sirekap

The current legal position of SIREKAP is contentious in terms of its function. SIREKAP is often seen as a tool, not an integral part of the electoral process. Electoral law reconstruction proposes that SIREKAP be revisited:

- a) SIREKAP's legal position: SIREKAP is only regulated in PKPU, so its position is weak compared to laws. In the hierarchy of laws and regulations, the rules in PKPU can be challenged if they are considered contrary to the law or the constitution.
- b) Consistency with the Principles of Democracy and Legal Certainty : Article 22E of the 1945 Constitution states, "That elections must be held directly, publicly, freely, secretly, honestly and fairly". Regulations governing election technology such as SIREKAP must guarantee these principles, especially in the aspects of honesty and fairness.

Through formal testing, legal reform should also ensure that SIREKAP implementation not only meets technical aspects but also provides fair legal certainty for all stakeholders.

3. The Principle of Legal Certainty in Elections

The principle of legal certainty, as stipulated in Article 28D paragraph (1) of the 1945 Constitution states, "*That everyone has the right to recognition, guarantees, protection, and certainty of a just law and equal treatment before the law.*" becomes the main reference in the reconstruction of the electoral system. In the context of SIREKAP, this principle includes:

- a) Strengthening regulations through the revision of the Election Law, namely, : Law No. 7/2017 should be revised to include more specific rules on the use of technology such as SIREKAP in the vote recapitulation process as the main instrument not as a counting tool at the polling station level to the KPU.
- b) The redesign of the formular plano model C-Results KWK is replaced with a digital system by being presented in digital form, namely, C-Results KWK Digital packaged in an "Excel-Optical Character Recognition" (OCR) based system that has been locked with formula synchronization detection, thus reducing the potential for errors from the number of ballots and ballots used and speeding up the calculation process at the polling station level.
- c) Synchronization of technical rules and field implementation, so that there are no different interpretations by election organizers at various levels.

- d) Guarantee the protection of citizens' voting rights, by ensuring that there are no errors or data manipulation during the recapitulation digitization process.

4. Material Testing of Legal Products

Material testing of electoral legal products aims to ensure that the substance of regulations on SIREKAP is in line with the values set out in the "1945 Constitution", especially:

a. Constitutional Rights of Citizens

The laws and regulations governing SIREKAP need to be examined whether they are in accordance with Article 28D paragraph (1) of the 1945 Constitution which states, *"Every person shall have the right to recognition, guarantees, protection, and certainty of a just law and equal treatment before the law."*, This article affirms the right of citizens to a just legal certainty. This regulation must :

- 1) Provide assurance that SIREKAP is a legitimate and recognized system for vote counting and recapitulation.
- 2) Guaranteeing citizens' constitutional right to know election results quickly, transparently and accurately.

b. Conformity with Democratic Principles

Material testing also needs to ensure that the use of SIREKAP does not violate the principles of openness and accountability in elections. Regulations should include:

- 1) SIREKAP system audit procedures to ensure data integrity.
- 2) Surveillance systems by election administrators and civil society.

5. Testing Legal Products Formally

The formal test aims to assess whether the process of forming election regulations has been in accordance with the procedures for the formation of laws and regulations as regulated in Law Number 12/2011 concerning the Formation of Legislation. Some aspects that need to be considered are:

a. Participatory Legislative Process

The formation of regulations on SIREKAP must involve :

- 1) Community groups and election participants to ensure regulations are not discriminatory.

- 2) Academics and information technology experts to ensure regulations meet technical standards.

b. Synchronization with the Electoral Legal Framework

SIREKAP regulations must be synchronized with other electoral laws, such as Law Number 7/2017 on Elections; Number 25/2003 on Voting and Counting in General Elections; and General Election Commission Regulation Number 5/2004 on Recapitulation of Vote Counting Results and Determination of General Election Results, so that there are no clashes of norms that can hinder implementation in the field.

6. Strengthening Sirekap as the Foundation of Legal Products

In the condification of electoral law, SIREKAP should be part of a functioning legal system:

- a) As the main instrument of vote counting, which is legally recognized from the TPS level to the KPU.
- b) As a transparent election result publication system, so that the public can access the recapitulation results in real-time.

7. Implications of Election Redress with Sirekap

a. Positive Impact :

- 1) Increased transparency: Election results can be accessed in real-time by the public.
- 2) Time and cost efficiency: The use of SIREKAP can speed up the recapitulation process and reduce operational costs.
- 3) Legal certainty is guaranteed: Clear regulations provide legitimacy for the use of technology in elections.

b. Challenges Faced :

- 1) Readiness of technological infrastructure, especially in remote areas.
- 2) Training of election organizers to understand and use SIREKAP effectively.
- 3) Potential cyber-attacks that require high-level security systems.

In the context of the legal framework of the Electronic Recapitulation Information System (SIREKAP) in the Election and Pilkada Law, the electronic recapitulation of election results has not yet received adequate regulation at the statutory level, especially in Law No. 7 of 2017 concerning Elections, which still relies on a tiered manual recapitulation system. However, the KPU (General Election Commission) in 2020 began implementing innovations using a digital system, namely, SIREKAP. However, the opportunity to regulate electronic systems in the election process is actually open, as stated in several articles in various related laws such as,

"Article 85 Paragraph (1) and (2a) of Law No. 10 of 2016 concerning Pilkada; Article 98 Paragraph (3) of Law No. 8 of 2015; and Article 111 Paragraph (1) and (2) of Law No. 1 of 2015." These articles provide the legal basis for several important aspects, such as the option of using electronic devices in voting, emphasis on the readiness of local government and community infrastructure, and flexibility in vote counting methods, both manual and electronic. In addition, further arrangements regarding vote counting and recapitulation mechanisms can be made through KPU Regulations, in consultation with the government.

The Constitutional Court (MK) Decision No. 147/PUU-VII/2009 on March 30, 2010 became the first "constitutional foundation" to support a broader interpretation of the use of electronic technology in voting. In the decision, the Court emphasized that the term "voting" does not only refer to manual voting but also includes e-voting mechanisms as a voting method that can evolve in accordance with the dynamics of technology and the times. The Court established cumulative prerequisites for the implementation of e-voting, such as: "compliance with the principles of elections, technological readiness, financing, human resources, software, and community readiness in the relevant regions."²⁸

With reference to the Constitutional Court's decision, if e-voting is considered a relevant method, this can also apply to vote counting and recapitulation at the polling station level. This means that the recapitulation method can adjust to the development of science and technology, with two main things that need to be further regulated, namely the expansion of the interpretation of electronic systems according to advances in information technology, as well as the specification of the time and stages of recapitulation to increase efficiency. To integrate electronic systems in Indonesia's elections, careful preparation and a strong legal basis are needed, both in the law and technical rules stipulated through KPU Regulations. The Election Law not only needs to accommodate technology in general, but should also include detailed arrangements at each stage of the election, emphasizing aspects of openness, confidentiality and security. There are nine key aspects to consider in designing a "Legal framework for the use of technology in elections, which include: (1) legal certainty, (2) transparency, (3) accountability, (4) efficiency, (5) accessibility, (6) data security, (7) fairness, (8) voter confidentiality, and (9) technical readiness."²⁹ With a clear and comprehensive legal

²⁸ Akhsan Firly Saetrian dkk., "Analisis Yuridis Tentang Sengketa Pemilu Terhadap Pelaksanaan Sistem Informasi Rekapitulasi (SIREKAP) Yang Terindikasi 'Defect' Pada Pemilu Tahun 2024 Yang Berpotensi Merugikan Bakal Calon Presiden," *Demokrasi: Jurnal Riset Ilmu Hukum, Sosial dan Politik* 1, no. 3 (2024): 231.

²⁹ Alasman Mpesau, "Transformasi Elektronika Digital dalam Penghitungan dan Rekapitulasi Suara Pemilu/Pilkada: Analisis Eksistensi Sistem di Persidangan Perselisihan Hasil di Mahkamah Konstitusi," *Jurnal Ilmu Manajemen Sosial Humaniora (JIMSH)* 6, no. 1 (2024): 25.

foundation, electronic systems can contribute to more modern and reliable elections in the future.

No	Aspect	Description
1	The Physical Aspects of Election Digitization	The digitization process requires granularity at various levels.
2	Transparent Procedure Aspects	Regulations need to govern access to machines or technology systems during elections, as well as be monitored by the public.
3	Trials and Certification	Election organizers should ensure that the technology undergoes certified trials, and the law should identify institutions authorized to provide certification.
4	Audit Mechanisms	The law should regulate the audit mechanism of the technology system, including the type of audit, and the scale of the audit.
5	Status of Audit Results and Electronic Results	The law should provide a way out if the audit results differ from the electronic election results.
6	Data Security and Storage	The security and storage of election data must be regulated in law, including the time period and procedures for deleting electronic data.
7	Identification of Voters	The law should regulate the use of biometrics on ID cards for voter identification, while observing the principle of secrecy in elections.
8	Access to source code	The law should regulate access to source code, whether open or not, for stakeholders.
9	Law Enforcement Related to Technology Application	The law should identify law enforcement issues arising from the application of new technologies and provide for their regulation.

Figure 2.1. Principles for Developing a Legal Framework for the Use of Technology

Therefore, researchers also made a framework for the Redesaian Model of an Efficient Election System for the Use of the Sirekap System in the Future. The first step, redressing the efficiency of the "*Model C-Results KWK*" form at the polling station level to reduce errors in the reading system in the Sirekap Mobile application used by KPPS in field reporting. The Plano Form "*Model C-Results KWK*" as a manual calculation

handwritten by KPPS officers is still prone to unclear numbers written as well as the potential for miswriting or error correction. Based on the results listed in the Plano Form "*Model C-Results KWK*", the KPPS officers then documented the results in the minutes and certificates of vote acquisition (form C-Results Copy-KWK). However, the complexity of this process is exacerbated by the number of parties involved and the different types of ballots that need to be counted. As a result, the vote counting process often presents various obstacles. In addition, the process of copying the minutes and certificates of vote acquisition that must be submitted to all parties who play a role in the vote count is very prone to writing errors. This has the potential to cause differences in content between the minutes of the event and the vote acquisition certificate received by the relevant parties.

The Plano "*Model C-Result KWK*" form can be replaced with a digital system by being presented in digital form, namely, C-Result KWK Digital packaged in an "*Excel-Optical Character Recognition*" (OCR) based system that has been locked with a formula synchronization detection to reduce errors from the number of ballots and ballots used when voting by KPPS. After calculating using the Digital C-General KWK which is packaged in the "*Excel-Optical Character Recognition*" (OCR) based KPPS can print the results of the calculation which will become the legal product of the calculation at the TPS Level, namely, Plano "*Model C-General KWK*" which will be duplicated and distributed to Witnesses, PTPS, PPK (form C-General KWK Copy) and the basis of documents uploaded in the Sirekap Mobile application. The results of vote counting at the polling station level can be monitored "*Real-Time*" by the public on the KPU City website, thus increasing transparency and openness in the election process.

Second, improving the security system of Sirekap Web in tiered calculations at the sub-district level where this calculation, often becomes a polemic for public confidence in the transparency and accuracy of vote acquisition data for the gap to commit fraudulent manipulation of vote data due to the lack of a security system to detect an automatic blocking system on Sirekap Web that can be accessed by the "*Voting Committee*" (PPS) and "*Sub-district Election Committee*" (PPK) before the day of the Open Plenary Meeting of the Recapitulation of Vote Acquisition Counting Results at the Sub-district Level. Furthermore, SIREKAP Web is synchronized with the mobile District Supervisory Committee, Political Party Witnesses and Independent Monitors who have registered with the General Election Commission, this step is the basis for SIREKAP to realize accountability, transparency, and efficiency as the principle of fairness in elections.

This research confirms that the successful implementation of the electoral system in the future does not solely depend on technological advances, but also on the legal legitimacy on which it is based. SIREKAP, as a technology-based system, must be thoroughly integrated with the applicable legal framework in order to guarantee

justice, legal certainty, and transparency in every stage of the election. Without the support of a strong legal foundation, SIREKAP will only be a technical innovation that is prone to facing various challenges, both in terms of application and legitimacy. Thus, the reconstruction and redesign of the electoral system that places SIREKAP as the main focus is a strategic step to realize democracy in Indonesia that is more substantial, efficient and inclusive. In the researcher's view, the legal aspect plays a central role in supporting the legitimization of SIREKAP as an integral part of the electoral system. The unclear legal position of SIREKAP in the hierarchy of laws and regulations can reduce public trust in this system. Therefore, it is necessary to reconstruct and reform related to the harmonization of arrangements in Law Number 7 of 2017 concerning General Elections does not explicitly include rules for the use of technology such as, SIREKAP with General Election Commission Regulation Number 25 of 2023 concerning Voting and Vote Counting in General Elections. This is because the explicit regulation of SIREKAP is clearly regulated through the General Election Commission Regulation (PKPU), which has a lower position in the hierarchy of laws and regulations. This raises legal issues, especially regarding legal certainty and regulatory legitimacy in the future.

V. CONCLUSION

The conclusion of this study confirms that the use of SIREKAP in the 2024 elections still faces legal and technical challenges that need to be resolved for the system to function effectively and fairly. While SIREKAP is expected to increase transparency and efficiency in vote counting, the discrepancies between the results and manual counting, security loopholes, and its legal status, which does not yet have strong legitimacy in the law, raise debates about its validity. Therefore, clearer regulatory harmonization and strengthened security systems are needed to ensure electoral fairness and maintain public confidence in election results.

As a suggestion, more comprehensive legal reforms are needed to make SIREKAP an integral part of the electoral system, not just a tool. This includes revising the Election Law to include clear regulations regarding the use of technology in the vote recapitulation process. In addition, improving security systems, independent audits, and education for organizers and voters are important steps to ensure that the use of technology in elections truly supports the principles of transparent, honest and fair democracy.

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