

The Impact of a compromised Chain of Custody on the Admissibility of Evidence in South African Criminal Trials

Xolisile Nomasonto Khanyile

Department of Law, University of Zululand, 1 Main Road, Vulindlela, KwaDlangezwa, 3886. T
Private Bag X1001, KwaDlangezwa, South Africa.

Corresponding author: AprilX@unizulu.ac.za

© Author(s)

OIDA International Journal of Sustainable Development, Ontario International Development Agency, Canada.

ISSN 1923-6654 (print) ISSN 1923-6662 (online) www.oidaijsd.com

Also available at <https://www.ssm.com/index.cfm/en/oida-intl-journal-sustainable-dev/>

Abstract: This paper examines the critical role of the chain of custody in South African criminal trials and the consequences when it is compromised. The chain of custody refers to the documented chronological record of the seizure, custody, control, transfer, analysis, and disposition of evidence. Its primary purpose is to ensure the integrity and authenticity of evidence presented in court, thereby upholding the fairness of legal proceedings. South African law, like many common law systems, places a high value on the reliability of evidence. A compromised chain of custody can cast doubt on the reliability and potentially lead to the inadmissibility of evidence. The paper will explore the legal principles governing the admissibility of evidence in South African criminal courts, with a particular focus on how a broken or incomplete chain of custody affects this admissibility. It will analyze relevant case law to illustrate how courts have dealt with instances where the integrity of evidence has been questioned due to chain of custody issues. Specific attention will be given to the discretion of the court in determining admissibility, considering factors such as the nature of the evidence, the extent of the breach in the chain, and the potential for tampering or contamination.

Furthermore, this paper will discuss the practical implications of maintaining a robust chain of custody for law enforcement officials, forensic experts, and legal practitioners. It will highlight the importance of meticulous record-keeping, secure handling procedures, and clear lines of responsibility in preserving the integrity of evidence. The challenges faced in real-world scenarios, such as the handling of digital evidence or evidence from complex crime scenes, will also be considered. The analysis will demonstrate that a compromised chain of custody can have severe consequences in South African criminal trials. It can lead to the exclusion of crucial evidence, potentially weakening the prosecution's case or undermining the defense. This can ultimately result in wrongful convictions or acquittals, thereby eroding public confidence in the justice system. The paper concludes by emphasizing the need for strict adherence to the chain of custody protocols to ensure the fairness and accuracy of criminal proceedings in South Africa. It underscores the ongoing importance of training, procedural safeguards, and judicial scrutiny in maintaining the integrity of evidence and upholding the rule of law.

Keywords: Admissibility of Evidence, Chain of Custody, Criminal Law, Criminal Trials Evidence

Introduction

The chain of custody refers to the documented and unbroken process that records the seizure, handling, transfer, analysis, and storage of evidence from the point of collection to its presentation in court.¹ It plays a crucial role in ensuring that the evidence remains authentic, untampered with, and admissible, thereby upholding the

¹ D'Anna, T., Puntarello, M., Cannella, G., Scalzo, G., Buscemi, R., Zerbo, S., & Argo, A. (2023, February). The chain of custody in the era of modern forensics: from the classic procedures for gathering evidence to the new challenges related to digital data. In *Healthcare* (Vol. 11, No. 5, p. 634). MDPI.

integrity of the criminal justice process.² In South African criminal law, while the concept is not codified in a single statute, it is supported by a composite legal framework that includes the *Criminal Procedure Act 51 of 1977* (CPA), the *Electronic Communications and Transactions Act 25 of 2002* (ECTA), and the *Regulation of Interception of Communications and Provision of Communication-Related Information Act 70 of 2002* (RICA).

For instance, section 210 of the CPA requires that all evidence presented in court must be relevant and reliable, which implicitly demands that its handling be free from procedural irregularities. Similarly, sections 14 and 15 of ECTA emphasise the integrity and reliability of electronic data, underscoring the importance of secure digital evidence management.³ Moreover, RICA governs the lawful interception and storage of communication-related data, making chain of custody protocols essential to prevent the exclusion of sensitive digital materials on constitutional grounds.⁴ These statutory frameworks operate alongside common law principles of evidence, which place the burden on the prosecution to demonstrate that the evidence has not been compromised.⁵ A compromised chain of custody where any link in the evidentiary trail is undocumented, improperly handled, or legally questionable poses a significant threat to the admissibility and probative value of forensic evidence.⁶ Forensic materials such as DNA samples, fingerprints, ballistic data, or electronic devices are particularly susceptible to contamination, loss, or manipulation when the chain is broken.⁷ This can lead to reasonable doubt about the authenticity or reliability of the evidence, which the defence may successfully exploit.⁸ Courts are then placed in a precarious position, as the evidentiary weight is undermined, and the risk of convicting an innocent person or acquitting a guilty party increases dramatically.⁹

Therefore, the chain of custody is not a mere administrative requirement but a legal necessity, intimately linked to the constitutional right to a fair trial under section 35 of the Constitution.¹⁰ A break in the chain can result in the exclusion of critical evidence, potentially leading to wrongful convictions or acquittals, thereby eroding public confidence in the justice system.¹¹ This is especially pertinent in high-stakes criminal trials where forensic evidence is often central to the prosecution's case. For example, in *S v Ndhlovu* 2002 (2) SACR 325 (SCA), the court reaffirmed the importance of evidentiary reliability and expressed concern over inadequate procedures in handling digital evidence, which directly implicates the chain of custody.¹² Accordingly, a robust and legally sound chain of custody is indispensable in safeguarding the rule of law, procedural justice, and the legitimacy of South African criminal trials.¹³ The purpose of this paper is to critically explore the legal and practical consequences of a compromised chain of custody, particularly its impact on the admissibility of forensic evidence in South African criminal trials. Given the centrality of reliable evidence in securing just outcomes, this paper examines how any deviation from standard evidentiary handling protocols whether through human error, negligence, or systemic inefficiencies may undermine the integrity of criminal proceedings.¹⁴ By interrogating relevant legal frameworks such as the *Criminal Procedure Act 51 of 1977*, the *Electronic Communications and Transactions Act 25 of 2002* (ECTA), and RICA as well as applicable common law principles and judicial precedent, the paper seeks to determine the threshold at which evidence may be excluded due to procedural lapses. In particular, the focus on forensic evidence highlights how technical and scientific materials, when not safeguarded by a secure chain of custody, can lose their probative value entirely. In order to achieve this, the paper is structured as follows: it begins by defining the concept of chain of custody and explaining its foundational role in evidentiary reliability. It then turns to the legal framework that governs evidence handling in South Africa,

² Sisodia, U. (2022). Chain of custody: scaling the investigation to the event. In *Crime Scene Management within Forensic Science: Forensic Techniques for Criminal Investigations* (pp. 407-418). Singapore: Springer Singapore.

³ Chapman, J. L. (2010). Should I Retain an Attorney or a CPA?: The Role of Evidentiary Privileges in Tax Litigation. *Southern Law Journal*, 20, 69.

⁴ Watney, M. (2015, August). State-on-nationals' electronic communication surveillance in South Africa: A murky legal landscape to navigate?. In *2015 Information Security for South Africa (ISSA)* (pp. 1-6). IEEE.

⁵ Govender, S. (2019). *Law Enforcement Officials' Perceptions of RICA as a Legislative Tool to Combat Crime* (Master's thesis, University of the Witwatersrand, Johannesburg (South Africa)).

⁶ Urmi, R. N. (2024). *Forensic Evidence on Homicide Investigation: A Comprehensive Analysis of its Crucial Role and Impact in Case Resolution* (Doctoral dissertation, East West University).

⁷ Alketbi, S. K. (2024). DNA contamination in crime scene investigations: Common errors, best practices, and insights from a survey study. *Biomed J Sci & Tech Res*, 58(5), 50970-50982.

⁸ Webster, C. M. (2022). Remanding justice for the innocent: Systemic pressures in pretrial detention to falsely plead guilty in Canada. *Wrongful Conv. L. Rev.*, 3, 128.

⁹ Ibid.

¹⁰ Franklyn, C. S. (2024). *Courting an intervention: conceptualising the judicial role in matters relating to section 139 of the South African constitution* (Doctoral dissertation, University of the Witwatersrand, Johannesburg).

¹¹ Findley, K. A. (2001). Learning from our mistakes: A criminal justice commission to study wrongful convictions. *Cal. WL Rev.*, 38, 333.

¹² Snyckers, F., & Le Roux, J. (2008). Criminal Procedure: Rights of Arrested, Detained and Accused Persons. *Constitutional Law of South Africa*, 2.

¹³ Skinnis, L. (2012). *Police custody: governance, legitimacy and reform in the criminal justice process*. Willan.

¹⁴ Risinger, D. M. (2000). Navigating expert reliability: Are criminal standards of certainty being left on the dock. *Alb. L. Rev.*, 64, 99.

drawing on statutory instruments, judicial precedent, and procedural guidelines.¹⁵ The discussion then moves to an analysis of the consequences of compromised chains of custody, supported by illustrative case law. This is followed by an examination of the practical implications for law enforcement, forensic experts, and legal practitioners. The paper further considers real-world challenges, such as those arising in digital evidence or complex crime scenes. Finally, it concludes with recommendations aimed at strengthening procedural safeguards and ensuring the continued fairness and credibility of the criminal justice system.

Research Problem

In South African criminal trials, the integrity and admissibility of evidence are essential to upholding the accused's constitutional right to a fair trial, as enshrined in Section 35 of the Constitution. A fundamental mechanism for preserving evidentiary integrity is the chain of custody, which ensures that evidence remains untampered, properly documented, and reliably presented in court. However, in practice, breaches in the chain of custody whether due to poor handling, inadequate documentation, or procedural lapses pose serious challenges to the administration of justice. Despite the existence of multiple legal frameworks such as the Criminal Procedure Act, ECTA, and RICA, there is limited scholarly focus on how South African courts apply these standards when determining the admissibility of evidence that has been mishandled or inadequately traced. This creates a legal and procedural gap that may result in wrongful acquittals or convictions, undermining public trust in the criminal justice system. Therefore, a critical examination of the legal implications and practical challenges of a compromised chain of custody is both necessary and urgent.

Research Questions

1. What legal principles and statutory frameworks govern the chain of custody and the admissibility of evidence in South African criminal trials?
2. How have South African courts interpreted and applied the requirement of a continuous chain of custody in case law where the integrity of evidence has been disputed?
3. What are the practical challenges faced by law enforcement, forensic experts, and legal practitioners in maintaining a secure chain of custody, particularly in the handling of physical and digital evidence?

Legal Framework Governing Chain of Custody in South Africa

Common Law Principles of Evidence

Under South African law, common law principles form the foundational framework that governs the admissibility of evidence, particularly in instances where statutory guidance is limited or silent.¹⁶ These principles underscore the importance of the burden of proof, evidentiary integrity, relevance, and reliability.¹⁷ In criminal trials, the prosecution bears the onus of proving the accused's guilt beyond a reasonable doubt.¹⁸ This obligation extends to proving that the evidence presented in court is authentic, uncontaminated, and has been handled in a manner that preserves its integrity from the point of collection to its presentation in court.¹⁹ A properly maintained chain of custody serves as crucial proof that the evidence has not been tampered with, substituted, or contaminated.²⁰ Any unexplained break or irregularity in this chain may compromise the reliability of the evidence and raise reasonable doubt, potentially rendering it inadmissible or reducing its evidentiary weight.²¹ This was clearly illustrated in *S v Maluka* 1962 (1) SA 693 (T), where the court stressed that failure to maintain proper custody of exhibits could lead to their exclusion if the authenticity of the evidence is placed in doubt.²² Similarly, in *S v Zungu* 1995 (2) SACR 552 (N), the court held that

¹⁵ Msuya, N. H. Statutory and Regulatory Framework, International Instruments, and Benchmarks for Evidence Use in Governance.

¹⁶ Snyckers, F. (2003). The law of evidence. *Annual Survey of South African Law*, 2003(1), 869-912.

¹⁷ Wells, J. (2013). *The admissibility of real evidence in the light of the Constitution of the Republic of South Africa, 1996* (Doctoral dissertation, University of South Africa).

¹⁸ Claassen, T. C. (2020). The Admissibility of Extrinsic Evidence in the Interpretation of Double Tax Conventions-A South African Perspective.

¹⁹ Claassen, T. C. (2020). The Admissibility of Extrinsic Evidence in the Interpretation of Double Tax Conventions-A South African Perspective.

²⁰ Alketbi, S. K. (2023). Maintaining the chain of custody: Anti-contamination measures for trace DNA evidence. *International Journal of Science and Research Archive*, 8(02), 457-461.

²¹ Khaliq, U. (2004). *The ethical foreign policy of the European Union: A legal appraisal*. University of London, University College London (United Kingdom).

²² Roth, A. (2013). Defying DNA: rethinking the role of the jury in an age of scientific proof of innocence. *BUL Rev.*, 93, 1643.

where the chain of custody was not properly established for a blood sample taken from the accused, the sample's evidentiary value was significantly diminished.²³

Further judicial commentary on this issue was provided in *S v Ndhlovu* 2002 (2) SACR 325 (SCA), where the court noted that while the absence of a perfect chain of custody does not automatically render evidence inadmissible, it does place an evidentiary burden on the State to explain the gaps and convince the court that the risk of tampering or misidentification was minimal.²⁴ In such cases, the trial court exercises discretion, guided by principles of fairness, to determine whether the evidence should be admitted and what weight, if any, should be attached to it.²⁵

These decisions reflect how common law principles continue to shape judicial reasoning concerning evidentiary integrity. Courts assess whether the evidence has retained its original form and whether the accused's constitutional right to a fair trial under Section 35 of the Constitution has been respected.²⁶ Ultimately, the chain of custody operates as a procedural safeguard that ensures that only credible, untainted, and lawfully obtained evidence is relied upon in reaching a verdict.

Criminal Procedure Act 51 of 1977

The *Criminal Procedure Act* 51 of 1977 (CPA) provides the principal legislative framework governing the conduct of criminal trials in South Africa, including the treatment and admissibility of evidence. While the Act does not explicitly define the concept of "chain of custody," several provisions implicitly support its legal significance. Section 210 of the CPA states that "no evidence as to any fact shall be admissible which is irrelevant or immaterial," thereby affirming that all evidence must be both relevant and reliable to be admitted.²⁷ This necessarily includes evidence that has been properly preserved and documented. A compromised chain of custody may raise doubts about the authenticity and integrity of evidence, rendering it irrelevant or unreliable, and therefore inadmissible under Section 210.²⁸

Another key provision is Section 37, which authorises police officers to take fingerprints, palm prints, photographs, body samples, and other identifying particulars of a suspect.²⁹ While Section 37 provides legal authority for evidence collection, it also places a duty on law enforcement to handle such evidence responsibly and lawfully, preserving its integrity from the point of collection to its use in court.³⁰ Any failure to document the transfer or storage of such evidence may give rise to challenges regarding its admissibility, especially where tampering or contamination is alleged. In *S v Ramgobin* 1986 (4) SA 117 (N), the court noted that real evidence must be shown to be in substantially the same condition as when it was first obtained, reinforcing the importance of chain of custody principles even in the absence of explicit statutory language. Together, Sections 210 and 37 underscore the CPA's emphasis on procedural fairness, evidentiary integrity, and the protection of the accused's constitutional right to a fair trial. The absence of a statutorily defined chain of custody does not diminish its legal significance, as the courts have interpreted these sections in conjunction with common law rules and constitutional mandates to require strict adherence to evidentiary safeguards.³¹ Thus, the CPA, while not exhaustive, lays the foundation upon which courts assess whether improperly handled evidence should be excluded due to a broken or incomplete chain of custody.

Electronic Communications and Transactions Act 25 of 2002 (ECTA)

The *Electronic Communications and Transactions Act* 25 of 2002 (ECTA) provides a crucial statutory framework for regulating the use, admissibility, and reliability of electronic communications and digital evidence in South Africa³². As digital technologies increasingly play a role in criminal investigations ranging from mobile phone records and emails to surveillance footage and metadata maintaining the integrity and authenticity of such evidence has become a

²³ Meintjies-Van Der Walt, L. (2010). The chain of custody and formal admissions. *South African Journal of Criminal Justice*, 23(3), 371-384.

²⁴ Gissing, A. (2022). *Bail and the Presumption of Innocence: A Comparative Legal Study* (Master's thesis, University of South Africa (South Africa)).

²⁵ Ibid.

²⁶ Ally, D. (2010). Constitutional exclusion under s 35 (5) of the Constitution: should an accused bear a threshold burden of proving that his or her constitutional right has been infringed?. *South African Journal of Criminal Justice*, 23(1), 22-38.

²⁷ Mnookin, R. H. (1975). Child-custody adjudication: Judicial functions in the face of indeterminacy. *Law and Contemporary Problems*, 39(3), 226-293.

²⁸ Giannelli, P. C. (1982). Chain of custody and the handling of real evidence. *Am. Crim. L. Rev.*, 20, 527.

²⁹ Cole, S. A. (2009). *Suspect identities: A history of fingerprinting and criminal identification*. Harvard University Press.

³⁰ Rajamäki, J., & Knuuttila, J. (2013, August). Law enforcement authorities' legal digital evidence gathering: Legal, integrity and chain-of-custody requirement. In *2013 European Intelligence and Security Informatics Conference* (pp. 198-203). IEEE.

³¹ Callery, B. G. (2009). Custody and Chain of Custody. In *Encyclopedia of Library and Information Sciences, Third Edition* (pp. 1388-1394). CRC Press.

³² Swales, L. (2019). An analysis of the regulatory environment governing electronic evidence in South Africa: suggestions for reform.

central concern. Sections 14 and 15 of ECTA specifically address the reliability of data messages and the conditions under which they may be admissible in legal proceedings. Section 14(1) states that the evidentiary weight of a data message shall be assessed by considering the reliability of the way it was generated, stored, and communicated. Likewise, Section 15(2) allows for the admissibility of data messages if the information was presented in a form that accurately reflects the original, ensuring functional equivalence with traditional evidence.

In the context of the chain of custody, these provisions require that digital evidence be collected, stored, and transferred in a manner that prevents alteration, deletion, or unauthorised access. A break in the digital chain such as failure to maintain metadata, improper seizure of electronic devices, or absence of digital signatures can lead to questions about the evidence's integrity and raise the risk of exclusion. In *S v Ndiki* (ECDC) unreported case no CA&R 101/06, the court expressed concern over the admissibility of electronic evidence that lacked sufficient safeguards to demonstrate reliability. This case, among others, highlights that digital evidence is subject to the same if not more stringent scrutiny as physical evidence due to its susceptibility to manipulation.

Moreover, ECTA's requirements dovetail with the Constitutional right to a fair trial under Section 35, reinforcing the obligation on the State to ensure that digital evidence is obtained and presented in a lawful, transparent, and verifiable manner. As such, ECTA plays a vital role in shaping judicial assessments of digital evidence and underscores the importance of maintaining a rigorous digital chain of custody in modern criminal trials. Failure to meet these statutory requirements may result not only in inadmissibility but may also weaken the prosecution's case and undermine public confidence in the criminal justice system's ability to handle technologically sophisticated evidence.

Regulation of Interception of Communications and Provision of Communication-Related Information Act (RICA)

The Regulation of Interception of Communications and Provision of Communication-Related Information Act 70 of 2002 (RICA) provides the legal basis for the lawful interception, collection, and handling of communication-related information in South Africa.³³ While primarily aimed at balancing the needs of law enforcement with the constitutional right to privacy, RICA also has direct implications for the admissibility of intercepted communications as evidence in criminal proceedings.³⁴ In this regard, the maintenance of a strict and documented chain of custody is essential to prove that the intercepted data such as voice recordings, SMS messages, or call records was lawfully obtained, securely stored, and not tampered with from the time of interception to its presentation in court.³⁵ RICA requires that interception be authorised by a designated judge under strict procedural safeguards, including the issuance of interception directions and retention notices (Sections 16–22).³⁶ Any intercepted material obtained outside the scope of such authorisation may be deemed unlawfully acquired, and therefore inadmissible, in terms of Section 35(5) of the Constitution, which excludes evidence obtained in violation of rights if its admission would render the trial unfair or otherwise detrimental to the administration of justice.³⁷ For example, in *Minister of Safety and Security v Van der Merwe and Others* 2011 (5) SA 61 (CC), the Constitutional Court underscored the need for law enforcement to adhere strictly to procedural requirements when obtaining personal information, reinforcing the link between procedural compliance and evidentiary admissibility.³⁸ Moreover, because intercepted communications are often stored in digital formats and handled by multiple parties, a robust digital chain of custody is necessary to maintain their probative value.³⁹ This includes documentation of who accessed the data, when, under what authority, and what handling procedures were followed. Failure to account for these processes such as gaps in access logs or missing metadata may cast doubt on the authenticity and integrity of the communication, thereby jeopardising its admissibility in court.⁴⁰

³³ Basimanyane, D. (2022). The regulatory dilemma on mass communications surveillance and the digital right to privacy in Africa: The case of South Africa. *African Journal of International and Comparative Law*, 30(3), 361-382.

³⁴ Fesehayee, N. T. (2017). Interception of communication by South African government agencies vis-à-vis the right to privacy: the law and the practice in light of the South African constitution and the international convention on civil and political rights (ICCPR).

³⁵ Fesehayee, N. T. (2017). Interception of communication by South African government agencies vis-à-vis the right to privacy: the law and the practice in light of the South African constitution and the international convention on civil and political rights (ICCPR).

³⁶ Govender, S. (2019). *Law Enforcement Officials' Perceptions of RICA as a Legislative Tool to Combat Crime* (Master's thesis, University of the Witwatersrand, Johannesburg (South Africa)).

³⁷ Modisane, G. T. (2019). *The Constitutionality of SARS Information Gathering Powers Under the Tax Administration Act* (Master's thesis, University of the Witwatersrand, Johannesburg (South Africa)).

³⁸ Okpaluba, C. (2018). The constitutional principle of accountability: a study of contemporary South African case law. *Southern African Public Law*, 33(1), 39-pages.

³⁹ Patil, R. Y., Patil, Y. H., Bannore, A., & Ranjanikar, M. (2024). Ensuring accountability in digital forensics with proxy re-encryption based chain of custody. *International Journal of Information Technology*, 16(3), 1841-1853.

⁴⁰ Premanand Narasimhan, D. N. (2024). Ensuring the Integrity of Digital Evidence: The Role of the Chain of Custody in Digital Forensics.

In sum, RICA complements other evidentiary frameworks by adding a constitutional and statutory layer of accountability to the collection and use of intercepted evidence.⁴¹ It reinforces the principle that evidence, no matter how potentially incriminating, must be obtained and handled in a lawful, transparent, and procedurally sound manner to be admitted in South African criminal trials.⁴² A compromised chain of custody in intercepted communications may not only lead to the exclusion of evidence but could also invite constitutional challenges, particularly where privacy and fair trial rights are implicated.⁴³

Judicial Precedent

In the absence of codified rules specifically detailing procedures for maintaining a chain of custody, South African courts have developed precedent through case law, which plays a pivotal role in shaping how evidentiary integrity is evaluated. Judicial decisions have consistently affirmed that while a perfect chain of custody is not always possible, courts must be satisfied that the evidence presented has not been tampered with, substituted, or otherwise compromised in a way that prejudices the accused. A foundational case is *S v Maluka* 1962 (1) SA 693 (T), where the court excluded a blood sample due to a failure by the police to establish a clear chain of custody. The decision underscored the court's insistence that the evidence must be shown to be in substantially the same condition as when it was first obtained. Similarly, in *S v Zungu* 1995 (2) SACR 552 (N), the court questioned the admissibility of a blood alcohol sample where there was inadequate evidence to establish who had custody of the sample between its collection and analysis. These cases reflect the judiciary's awareness that a break in the evidentiary chain may undermine both the probative value and admissibility of the evidence.

In *S v Ndhlovu* 2002 (2) SACR 325 (SCA), the Supreme Court of Appeal clarified that minor defects in the chain of custody do not automatically render evidence inadmissible. Instead, courts are empowered to exercise judicial discretion by evaluating the totality of the circumstances. The key inquiry is whether the break in the chain has materially affected the reliability or authenticity of the evidence. This discretionary approach was further reinforced in *S v Ramgobin and Others* 1986 (4) SA 117 (N), where the court held that real evidence must be shown to be in substantially the same condition as when initially obtained, but also that the court could admit it if the State could sufficiently account for any potential discrepancies. The courts have also recognised the heightened importance of chain of custody in the context of digital evidence, although jurisprudence in this area remains comparatively underdeveloped. In the unreported decision of *S v Ndiki* (ECDC, Case No. CA&R 101/06), the Eastern Cape High Court noted that the lack of secure handling and proper digital safeguards rendered certain electronic records unreliable and potentially inadmissible.

Overall, judicial discretion plays a critical balancing role, allowing courts to consider the nature of the evidence, the seriousness of the procedural breach, and whether any prejudice arises to the accused. This discretion is exercised within the broader constitutional imperative to ensure a fair trial under Section 35(3) of the Constitution, as well as to safeguard the administration of justice under Section 35(5), which permits exclusion of evidence obtained in violation of constitutional rights if its admission would be unfair or unjust.

SAPS Standard Operating Procedures

The SAPS Standard Operating Procedures (SOPs) serve as a vital internal framework for safeguarding the integrity and admissibility of evidence, particularly in the context of cybercrime and electronic investigations.⁴⁴ Developed under Section 26 of the Cybercrimes Act 19 of 2020, these procedures complement statutory requirements by establishing detailed forensic and investigative protocols for the search, access, seizure, packaging, storage, transportation, and analysis of articles including data, devices, and storage media. Central to these SOPs is the maintenance of a verifiable chain of custody, which must be meticulously recorded through affidavits detailing each transfer of evidence, the condition of the items, and the identities of handling personnel.⁴⁵ The SOPs explicitly require that only trained officials or authorised specialists engage in evidence handling, ensuring that articles are neither tampered with nor altered in ways that could compromise authenticity, reliability, or legal admissibility. Furthermore, the SOPs highlight key forensic principles such as data integrity, audit trails, and proportionality, aligning with

⁴¹ Ramluckan, T., & Patrick, H. (2021, June). Digital Evidence in Disciplinary Hearings: Perspectives From South Africa. In *ECCWS 2021 20th European Conference on Cyber Warfare and Security* (Vol. 346). Academic Conferences Inter Ltd.

⁴² Omeleze, S. A. (2017). *Digital Forensic Evidence Acquisition to Mitigate Neighbourhood Crime*. University of Pretoria (South Africa).

⁴³ Kebande, V. R., & Venter, H. S. (2018). On digital forensic readiness in the cloud using a distributed agent-based solution: issues and challenges. *Australian Journal of Forensic Sciences*, 50(2), 209-238.

⁴⁴ Ssemu, J. (2017). *Electronic evidence management: adoption of standard operating procedures for admissibility of electronic evidence in the Ugandan courts of law* (Doctoral dissertation, Kampala International University, School of Computing and Information Technology).

⁴⁵ Musoni, M. Legal challenges of establishing jurisdiction over cloud data: addressing the gaps in South Africa's cybercrime legislative framework.

constitutional safeguards under Section 35(5) of the Constitution.⁴⁶ For example, the SOPs mandate that the digital forensic process preserve the evidentiary value of data without materially altering its content or metadata. Articles are to be packaged securely, labelled clearly, and stored in controlled environments to prevent deterioration or contamination.⁴⁷ Any deviation from these protocols such as undocumented access, incorrect handling, or failure to follow prescribed packaging and storage methods can disrupt the chain of custody and render the evidence inadmissible, thereby jeopardising the fairness of the trial.⁴⁸

The SAPS SOPs not only illustrate the operational expectations of law enforcement in handling evidence but also underscore the legal consequences of procedural failures. A compromised chain of custody whether due to negligence, lack of expertise, or systemic flaws can significantly affect the outcome of a criminal trial, potentially leading to the exclusion of crucial evidence and undermining the credibility of the investigative process. Therefore, strict adherence to these internal protocols is essential, not only to uphold the rule of law but also to reinforce public confidence in the criminal justice system.

Consequences of a Compromised Chain of Custody

A compromised chain of custody can significantly undermine the integrity and admissibility of evidence in both criminal and civil proceedings. To begin with, when the chain of custody is not meticulously maintained, the risk of tampering, loss, or contamination of real evidence increases, thereby weakening the evidentiary value before the court.⁴⁹ As Giannelli aptly observes, the legal system requires a “reasonable assurance” that the evidence presented is what it purports to be, and any gaps in the chain can cast doubt on its authenticity.⁵⁰ Furthermore, emerging technologies such as blockchain have been proposed to mitigate these vulnerabilities by ensuring an immutable, traceable record of evidence handling.⁵¹ However, even with such innovations, if procedural lapses occur for example, in digital forensics or cryptographic asset seizures legal and ethical questions may arise regarding the reliability and legality of the evidence.⁵² In the context of healthcare data and digital imagery, compromised custody processes can further result in misdiagnosis, data breaches, or even legal liabilities for healthcare institutions.⁵³ Additionally, in law enforcement operations, the inability to guarantee evidentiary integrity can lead to wrongful convictions or the acquittal of guilty parties, ultimately eroding public trust in the justice system.⁵⁴ Notably, the implications extend beyond criminal law into areas such as asset management and child custody battles, where contested evidence can decisively alter outcomes.⁵⁵ Therefore, safeguarding the chain of custody is not merely a procedural formality but a fundamental aspect of justice administration, as it ensures fairness, transparency, and accountability throughout legal proceedings.⁵⁶

Recommendations

In light of the legal and practical challenges associated with maintaining a secure and unbroken chain of custody, especially in complex and technology-driven investigations, several recommendations are necessary to enhance evidentiary integrity and support the fair administration of justice. Firstly, there is an urgent need for standardised national guidelines governing chain of custody procedures across all law enforcement and forensic agencies in South Africa. While statutory frameworks such as the CPA, ECTA, and RICA provide general parameters, they fall short of offering detailed, uniform protocols for the collection, documentation, storage, and presentation of both physical and

⁴⁶ Kganyane, K. I. (2018). *The Significance of Video Evidence Analysis in the Investigation of Murder Cases Against the Police*. University of South Africa (South Africa).

⁴⁷ Sontundu, S. S. (2021). *The Significance of Blood Spatter Analysis to Reconstruct Murder Scenes* (Master's thesis, University of South Africa (South Africa)).

⁴⁸ Ssemuddu, J. (2017). *Electronic evidence management: adoption of standard operating procedures for admissibility of electronic evidence in the Ugandan courts of law* (Doctoral dissertation, Kampala International University, School of Computing and Information Technology).

⁴⁹ Branthwaite, M. (2001). Deaths in Custody—Causes and Legal Consequences. *Medico-Legal Journal*, 69(3), 107–114.

⁵⁰ Giannelli, Paul C., "Chain of Custody and the Handling of Real Evidence" (1983). *Faculty Publications*. 760.

⁵¹ Batista, D., Mangeth, A. L., Frajhof, I., Alves, P. H., Nasser, R., Robichez, G., Silva, G. M., & Miranda, F. P. d. (2023). Exploring blockchain technology for chain of custody control in physical evidence: A systematic literature review. *Journal of Risk and Financial Management*, 16(8), 360. <https://doi.org/10.3390/jrfm16080360>.

⁵² Ibid.

⁵³ Morgan, J. (2023). Wrongful convictions and claims of false or misleading forensic evidence. *Journal of forensic sciences*, 68(3), 908-961.

⁵⁴ Rajamäki, J., & Knuuttila, J. (2013, August). Law enforcement authorities' legal digital evidence gathering: Legal, integrity and chain-of-custody requirement. In *2013 European Intelligence and Security Informatics Conference* (pp. 198-203). IEEE.

⁵⁵ Ruiz-Garcia, M., Cáceres, A. M., Luengas-Villamil, K., Aliaga-Rossell, E., Zeballos, H., Singh, M. D., & Shostell, J. M. (2022). Mitogenomic phylogenetics and population genetics of several taxa of agouties (*Dasyprocta* sp., *Dasyproctidae*, *Rodentia*): molecular nonexistence of some claimed endemic taxa. *Mammal Research*, 67(3), 367-397.

⁵⁶ Heinz, W. S. (2024). Strategies for Ensuring the Fair Treatment of Persons in Police Custody: Past, Present and Future. In *Fair Treatment of Persons in Police Custody* (pp. 235-268). Cham: Springer International Publishing.

digital evidence. A national framework would reduce inconsistencies, close procedural gaps, and ensure that all stakeholders adhere to best practices aligned with constitutional and evidentiary standards.

Secondly, comprehensive training and professional development for members of the South African Police Service (SAPS), forensic analysts, and prosecuting authorities should be institutionalised. Many breaches in the chain of custody arise not from malice, but from a lack of technical expertise, insufficient procedural knowledge, or inadequate understanding of legal implications. Capacity-building initiatives should include practical workshops on forensic handling, digital evidence acquisition, legal reporting standards, and courtroom presentation, thereby empowering personnel to manage evidence with the highest levels of accuracy and accountability.

Thirdly, it is recommended that the criminal justice system invest in digital chain of custody tools and secure audit trail technologies, particularly blockchain-based or encrypted logging systems. Such tools can provide immutable, time-stamped records of each evidentiary interaction—who accessed it, when, under what authority, and for what purpose thus strengthening the reliability and traceability of both physical and electronic materials. As highlighted in recent scholarly literature, such technologies hold the potential to revolutionise forensic accountability and reduce human error. Fourth, there must be a greater emphasis on the duty of disclosure, especially in cases where the chain of custody has been interrupted or remains unclear. Prosecutors should be compelled to proactively disclose any weaknesses or breaks in the evidentiary chain to the defence and the court. This not only aligns with ethical prosecutorial conduct but also upholds the constitutional right to a fair trial under Section 35. Courts, in turn, should critically assess whether such disclosure sufficiently mitigates prejudice to the accused or whether exclusion of the evidence is warranted.

Conclusion

The significance of an unbroken and properly documented chain of custody in South African criminal trials cannot be overstated. It is an indispensable mechanism for ensuring that evidence whether physical, biological, or digital is both reliable and admissible, and that its probative value remains intact from the moment of collection to its presentation in court. As established through statutory instruments such as the Criminal Procedure Act 51 of 1977, ECTA, and RICA, as well as through common law and judicial precedent, the chain of custody serves as a critical procedural safeguard tied to the constitutional right to a fair trial under section 35 of the Constitution.

When the chain of custody is compromised, the consequences are legally and ethically severe. Forensic evidence may be excluded or significantly diminished in weight, thereby weakening the prosecution's case or opening avenues for reasonable doubt. This undermines the administration of justice and may result in the wrongful conviction of the innocent or the acquittal of the guilty. Moreover, in a legal system already burdened by resource constraints, delayed justice, and public skepticism, any breach in procedural integrity particularly in high-stakes cases involving DNA, electronic devices, or intercepted communications further erodes public confidence in the credibility and fairness of judicial outcomes. In an era increasingly defined by technological complexity and digital evidence, the need for strict evidentiary protocols is more urgent than ever. While legislative frameworks provide a foundational structure, they are not self-executing. Their effectiveness depends on practical enforcement, professional competence, and a collective institutional commitment to accountability and transparency. The judiciary plays a pivotal role in this regard, not only by enforcing compliance through evidentiary rulings but also by reinforcing procedural standards that reflect the evolving realities of forensic science and cybercrime. The findings of this paper thus call for a holistic approach combining legal reform, operational consistency, and technological innovation. Procedural rigor must be the norm, not the exception. Law enforcement agencies must adhere to standardised chain of custody protocols, invest in continuous professional development, and adopt digital audit tools that create tamper-proof records of evidentiary handling. Likewise, prosecutorial and judicial officers must remain vigilant in identifying and remedying lapses, while balancing the rights of the accused with the interests of justice. Ultimately, the chain of custody is more than a procedural formality it is a linchpin of justice. By reinforcing the legal, ethical, and institutional imperatives that underpin its proper maintenance, South Africa can continue to uphold the principles of fairness, due process, and constitutionalism in its criminal justice system. Failing to do so not only risks individual miscarriages of justice but may also compromise the broader legitimacy of the legal system in the eyes of the public.

Reference

D'Anna, T., Puntarello, M., Cannella, G., Scalzo, G., Buscemi, R., Zerbo, S., & Argo, A. (2023, February). The chain of custody in the era of modern forensics: from the classic procedures for gathering evidence to the new challenges related to digital data. In *Healthcare* (Vol. 11, No. 5, p. 634). MDPI.

Sisodia, U. (2022). Chain of custody: scaling the investigation to the event. In *Crime Scene Management within Forensic Science: Forensic Techniques for Criminal Investigations* (pp. 407-418). Singapore: Springer Singapore.

Chapman, J. L. (2010). Should I Retain an Attorney or a CPA?: The Role of Evidentiary Privileges in Tax Litigation. *Southern Law Journal*, 20, 69.

Watney, M. (2015, August). State-on-nationals' electronic communication surveillance in South Africa: A murky legal landscape to navigate?. In *2015 Information Security for South Africa (ISSA)* (pp. 1-6). IEEE.

Govender, S. (2019). *Law Enforcement Officials' Perceptions of RICA as a Legislative Tool to Combat Crime* (Master's thesis, University of the Witwatersrand, Johannesburg (South Africa)).

Urmi, R. N. (2024). *Forensic Evidence on Homicide Investigation: A Comprehensive Analysis of its Crucial Role and Impact in Case Resolution* (Doctoral dissertation, East West University).

Alketbi, S. K. (2024). DNA contamination in crime scene investigations: Common errors, best practices, and insights from a survey study. *Biomed J Sci & Tech Res*, 58(5), 50970-50982.

Webster, C. M. (2022). Remanding justice for the innocent: Systemic pressures in pretrial detention to falsely plead guilty in Canada. *Wrongful Conv. L. Rev.*, 3, 128.

Franklyn, C. S. (2024). *Courting an intervention: conceptualising the judicial role in matters relating to section 139 of the South African constitution* (Doctoral dissertation, University of the Witwatersrand, Johannesburg).

Findley, K. A. (2001). Learning from our mistakes: A criminal justice commission to study wrongful convictions. *Cal. WL Rev.*, 38, 333.

Snyckers, F., & Le Roux, J. (2008). *Criminal Procedure: Rights of Arrested, Detained and Accused Persons*. Constitutional Law of South Africa, 2.

Skinns, L. (2012). Police custody: governance, legitimacy and reform in the criminal justice process. *Willan*.

Risinger, D. M. (2000). Navigating expert reliability: Are criminal standards of certainty being left on the dock. *Alb. L. Rev.*, 64, 99.

Msuya, N. H. *Statutory and Regulatory Framework, International Instruments, and Benchmarks for Evidence Use in Governance*.

Snyckers, F. (2003). The law of evidence. *Annual Survey of South African Law*, 2003(1), 869-912.

Wells, J. (2013). *The admissibility of real evidence in the light of the Constitution of the Republic of South Africa, 1996* (Doctoral dissertation, University of South Africa).

Claassen, T. C. (2020). *The Admissibility of Extrinsic Evidence in the Interpretation of Double Tax Conventions-A South African Perspective*.

Claassen, T. C. (2020). *The Admissibility of Extrinsic Evidence in the Interpretation of Double Tax Conventions-A South African Perspective*.

Alketbi, S. K. (2023). Maintaining the chain of custody: Anti-contamination measures for trace DNA evidence. *International Journal of Science and Research Archive*, 8(02), 457-461.

Khaliq, U. (2004). *The ethical foreign policy of the European Union: A legal appraisal*. University of London, University College London (United Kingdom).

Roth, A. (2013). Defying DNA: rethinking the role of the jury in an age of scientific proof of innocence. *BUL Rev.*, 93, 1643.

Meintjies-Van Der Walt, L. (2010). The chain of custody and formal admissions. *South African Journal of Criminal Justice*, 23(3), 371-384.

Gissing, A. (2022). *Bail and the Presumption of Innocence: A Comparative Legal Study* (Master's thesis, University of South Africa (South Africa)).

Ibid.

Ally, D. (2010). Constitutional exclusion under s 35 (5) of the Constitution: should an accused bear a threshold burden of proving that his or her constitutional right has been infringed?. *South African Journal of Criminal Justice*, 23(1), 22-38.

Mnookin, R. H. (1975). Child-custody adjudication: Judicial functions in the face of indeterminacy. *Law and Contemporary Problems*, 39(3), 226-293.

Giannelli, P. C. (1982). Chain of custody and the handling of real evidence. *Am. Crim. L. Rev.*, 20, 527.

Cole, S. A. (2009). *Suspect identities: A history of fingerprinting and criminal identification*. Harvard University Press.

Rajamäki, J., & Knuuttila, J. (2013, August). Law enforcement authorities' legal digital evidence gathering: Legal, integrity and chain-of-custody requirement. In *2013 European Intelligence and Security Informatics Conference* (pp. 198-203). IEEE.

Callery, B. G. (2009). Custody and Chain of Custody. In *Encyclopedia of Library and Information Sciences*, Third Edition (pp. 1388-1394). CRC Press.

Swales, L. (2019). An analysis of the regulatory environment governing electronic evidence in South Africa: suggestions for reform.

Basimanyane, D. (2022). The regulatory dilemma on mass communications surveillance and the digital right to privacy in Africa: The case of South Africa. *African Journal of International and Comparative Law*, 30(3), 361-382.

Fesehaye, N. T. (2017). Interception of communication by South African government agencies vis-à-vis the right to privacy: the law and the practice in light of the South African constitution and the international convention on civil and political rights (ICCPR).

Fesehaye, N. T. (2017). Interception of communication by South African government agencies vis-à-vis the right to privacy: the law and the practice in light of the South African constitution and the international convention on civil and political rights (ICCPR).

Govender, S. (2019). *Law Enforcement Officials' Perceptions of RICA as a Legislative Tool to Combat Crime* (Master's thesis, University of the Witwatersrand, Johannesburg (South Africa)).

Modisane, G. T. (2019). *The Constitutionality of SARS Information Gathering Powers Under the Tax Administration Act* (Master's thesis, University of the Witwatersrand, Johannesburg (South Africa)).

Okpaluba, C. (2018). The constitutional principle of accountability: a study of contemporary South African case law. *Southern African Public Law*, 33(1), 39-pages.

Patil, R. Y., Patil, Y. H., Bannore, A., & Ranjanikar, M. (2024). Ensuring accountability in digital forensics with proxy re-encryption based chain of custody. *International Journal of Information Technology*, 16(3), 1841-1853.

Premanand Narasimhan, D. N. (2024). *Ensuring the Integrity of Digital Evidence: The Role of the Chain of Custody in Digital Forensics*.

Ramluckan, T., & Patrick, H. (2021, June). Digital Evidence in Disciplinary Hearings: Perspectives From South Africa. In *ECCWS 2021 20th European Conference on Cyber Warfare and Security* (Vol. 346). Academic Conferences Inter Ltd.

Omeleze, S. A. (2017). *Digital Forensic Evidence Acquisition to Mitigate Neighbourhood Crime*. University of Pretoria (South Africa).

Kebande, V. R., & Venter, H. S. (2018). On digital forensic readiness in the cloud using a distributed agent-based solution: issues and challenges. *Australian Journal of Forensic Sciences*, 50(2), 209-238.

Ssemuddu, J. (2017). *Electronic evidence management: adoption of standard operating procedures for admissibility of electronic evidence in the Ugandan courts of law* (Doctoral dissertation, Kampala International University, School of Computing and Information Technology).

Musoni, M. *Legal challenges of establishing jurisdiction over cloud data: addressing the gaps in South Africa's cybercrime legislative framework*.

Kgamanyane, K. I. (2018). *The Significance of Video Evidence Analysis in the Investigation of Murder Cases Against the Police*. University of South Africa (South Africa).

Sontundu, S. S. (2021). *The Significance of Blood Spatter Analysis to Reconstruct Murder Scenes* (Master's thesis, University of South Africa (South Africa)).

Ssemuuddu, J. (2017). *Electronic evidence management: adoption of standard operating procedures for admisability of electronic evidence in the Ugandan courts of law* (Doctoral dissertation, Kampala International University, School of Computing and Information Technology).

About the authors:

Affiliation: Department of Criminal and Procedural Law, Faculty of Law, University of Zululand

Brief Description of Work: Dr. Khanyile is a senior law lecturer and researcher specialising in criminal law, law of evidence, and constitutionalism, with a particular focus on decolonisation, , and the admissibility of electronic

Mailing Address: University of Zululand, Faculty of Law, Private Bag X1001, KwaDlangezwa, 3886, South Africa

Tel: +27 (0)35 902 6713 (office Line)Cellphone: +27787059269

E-mail: AprilX@unizulu.ac.za

