

The Legal Standing of Deepfake Digital Evidence in Criminal Proceedings: Challenges of Evidentiary Integrity in the AI Era

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The rapid advancement of Artificial Intelligence (AI) has introduced deepfake technology, triggering a crisis of authenticity regarding criminal evidence. This study aims to analyze the legal standing of deepfakes within the Indonesian criminal justice system and the challenges of maintaining evidentiary integrity during trials. Employing a normative legal research method, this study examines the synchronization between technological developments and current positive law regulations. The results indicate that while the ITE Law recognizes electronic information and documents as valid legal evidence, the emergence of deepfakes poses an existential threat to the "seeing is believing" judicial paradigm. This technology is capable of manipulating visual and audio realities with high precision, making it increasingly difficult to distinguish from authentic recordings. These findings highlight a significant gap in digital forensic standards and judicial readiness in Indonesia. The lack of specific verification protocols risks the admission of fabricated evidence, which could ultimately undermine the pursuit of justice. The study concludes by emphasizing the urgent need for judicial procedural reforms and the establishment of specialized AI forensic protocols. Such measures are crucial to mitigate the risk of judicial errors and ensure that the legal system remains adaptive yet rigorous in safeguarding evidentiary validity in the era of digital disruption.

Keywords: Artificial Intelligence, Deepfakes, ITE Law, Evidentiary Integrity, Digital Forensics

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1. Introduction

The global digital landscape has undergone a radical and disruptive transformation with the rapid ascent of Generative Artificial Intelligence (AI). Among the most contentious outputs of this technological evolution is the emergence of deepfakes, highly sophisticated synthetic media created through deep learning architectures, such as Generative Adversarial Networks (GANs). These algorithms are capable of superimposing a person's likeness, manipulating facial expressions, or synthesizing a human voice with such high fidelity that the resulting media is virtually indistinguishable from authentic recordings to the naked eye. While AI offers immense potential for innovation in entertainment and education, its weaponization in the legal sphere introduces an unprecedented reality apathy. This phenomenon creates a crisis of authenticity, where the foundational legal principle of seeing is believing is fundamentally compromised, potentially turning digital evidence into a vehicle for deception, misinformation, and character assassination within the courtroom.

In the realm of criminal law, the integrity of evidence is the bedrock upon which the pursuit of justice rests. For decades, video and audio recordings have been treated as silent witnesses, objective observers of physical reality that provide judges with an unfiltered view of a crime scene or a confession. However, the advent of deepfakes shatters this objectivity. If a video can be fabricated to show a defendant at a crime scene they never visited, or a voice recording can be synthesized to mimic a confession that was never spoken, the very concept of truth becomes malleable. This technological shift does not merely add a new

type of evidence to the docket; it necessitates a complete re-evaluation of how the legal system validates any digital artifact. In Indonesia, the legal framework is primarily anchored in Law No. 11 of 2008 on Electronic Information and Transactions (ITE Law). While the ITE Law recognizes electronic documents as valid legal evidence, it was largely conceived during an era of traditional digital manipulation, such as basic photo editing, and assumes that digital evidence is a direct reflection of physical reality if its metadata remains intact.

Deepfakes present a unique challenge because they bypass these traditional verification methods; they are not necessarily tampered files but are fundamentally false realities generated from the outset, often possessing a clean metadata trail. This discrepancy highlights a significant judicial gap within the Indonesian criminal justice system. Current procedural laws, specifically the Criminal Procedure Code (KUHAP), are increasingly ill-equipped to handle the nuances of AI generated content. Judges, prosecutors, and defense attorneys are now confronted with a landscape where the authenticity of every digital clip can be called into question. Without specialized forensic protocols or a high level of technological literacy among judicial actors, the system risks falling into the Liar's Dividend, where guilty parties claim authentic evidence is a deepfake to escape conviction, or conversely, Judicial Error, where innocent individuals are convicted based on highly persuasive but entirely fabricated digital proof.

Furthermore, the arms race between deepfake generation and detection is heavily skewed, as detection remains a resource-intensive process that often lags behind the pace of innovation. In the Indonesian context, where digital forensic laboratories are often centralized and under resourced, the ability to conduct high level AI verification for every criminal case is a logistical impossibility under current standards. This creates a vulnerability in the due process of law, as the burden of proving or disproving the authenticity of a sophisticated deepfake may become an insurmountable hurdle for the defense, potentially violating the principle of the presumption of innocence. This study addresses these pressing concerns by examining the legal standing of deepfakes within the current Indonesian evidentiary hierarchy and the evolving standards of digital forensics. By identifying vulnerabilities in the existing legal infrastructure, this research argues for an urgent overhaul of procedural laws and the establishment of specialized AI forensic protocols to ensure that the pursuit of justice remains resilient against the disruptive tide of digital manipulation.

2. Literature Review and Problem Statement

The intellectual discourse surrounding Artificial Intelligence in the legal sphere has shifted from speculative ethics to an urgent crisis of evidentiary integrity, primarily centered on the phenomenon of reality apathy as conceptualized by Chesney and Citron (2019). In this context, the Problem Statement arises from a fundamental technological paradox: while the Indonesian criminal justice system relies on the ITE Law and the Criminal Procedure Code (KUHAP) to validate digital artifacts, these frameworks are built upon a static understanding of digital data. Traditional forensic standards, such as those governed by ISO/IEC 27037, focus on the preservation of metadata and the chain of custody to ensure that a file has not been altered after its creation. However, deepfakes, generated through Generative Adversarial Networks (GANs), represent a synthetic reality that is fabricated from its inception. This means a deepfake can possess a technically perfect metadata trail and a flawless chain of custody while conveying an entirely false narrative. The core of the problem lies in this ontological gap: the law treats digital evidence as a digital footprint of a physical event, but AI allows for the creation of a footprint where no foot has ever stepped. Consequently, the Indonesian judiciary faces an existential threat where the best evidence rule is rendered obsolete, as the visual persuasiveness of a deepfake can easily overwhelm the subjective discretion of a judge who lacks the specialized forensic tools to deconstruct AI-generated artifacts.

Building upon this, the literature review identifies a critical arms race between AI generation and detection that leaves the Indonesian legal infrastructure in a state of vulnerability. Scholarly works by Hassan et al. (2020) and Westerlund (2019) emphasize that as GANs become more sophisticated, the digital artifacts, such as unnatural blinking or pixel inconsistencies that once allowed forensic experts to identify fakes are rapidly disappearing. In the Indonesian legal landscape, researchers like Josua Sitompul (2021) and Mahrus Ali (2020) have noted that while the ITE Law provides the functional equivalence for electronic evidence, it does not provide a specific probative weight hierarchy for AI generated content. This creates what is known as the Liar's Dividend, a term describing a situation where the mere existence of deepfake technology allows a guilty defendant to cast doubt on authentic incriminating evidence by simply claiming it is a sophisticated fake. Literature suggests that without a clear, legally mandated AI Specific Forensic Protocol, the Indonesian courts are susceptible to a dual failure: the admission of fabricated evidence leading to wrongful convictions (Judicial Error), or the dismissal of authentic evidence due to manufactured doubt, thereby undermining the state's ability to prosecute crimes effectively. The current literature further points out that Indonesian judicial actors judges, prosecutors, and defense attorneys suffer from a technological literacy gap that prevents them from critically assessing the scientific validity of digital forensics in the age of generative AI.

The synthesis of these problems necessitates a radical departure from traditional evidentiary theories toward a model of *Authenticity by Design* and multi-layered verification. Current academic thought suggests that the Indonesian government must transition from a reactive legislative stance to a proactive one by integrating blockchain based digital signatures or encrypted provenance metadata into the legal requirements for digital evidence. The problem statement thus concludes that the current state of the Indonesian Criminal Procedure Code is dangerously stagnant, as it still adheres to a 20th century understanding of documentary evidence in a 21st century synthetic era. The absence of a specialized regulatory framework to govern the admissibility of AI-generated media not only threatens the due process of law but also compromises the principle of legal certainty (*Rechtssicherheit*). If the law cannot distinguish between a captured truth and a generated lie, the entire structure of criminal liability is at risk of collapse. Therefore, this research fills a vital gap in the literature by proposing a normative forensic Hybrid Framework that redefines authenticity in the Indonesian context, moving beyond the simple chain of custody to a comprehensive technological verification standard that accounts for the nuances of neural network outputs and the deceptive potential of high-fidelity synthetic media.

3. Method

This research employs a normative legal research method, often characterized as doctrinal research, to critically evaluate the adequacy of the Indonesian legal framework in the face of rapidly evolving generative AI technologies. By treating law as a comprehensive system of norms and principles, this study focuses on the legal vacuum created by the ontological shift from manipulated media to synthesized reality. The primary analytical tool is the statutory approach (*pendekatan perundang-undangan*), which involves a rigorous examination of the Indonesian Criminal Procedure Code (KUHP) and the Law on Electronic Information and Transactions (ITE Law), specifically Articles 5 and 6 regarding the admissibility of electronic documents. This is complemented by a conceptual approach (*pendekatan konseptual*) that integrates forensic theories of "reality apathy" and the Liar's Dividend into the legal discourse. This dual approach allows the research to move beyond a literal interpretation of the law, addressing the broader implications of synthetic truth and exploring how the current definition of electronic information fails to account for high fidelity media that possesses no physical or original counterpart.

The data for this study is derived from secondary legal materials, categorized into three hierarchical tiers to ensure academic rigor and legal validity. Primary materials consist of the 1945 Constitution, the KUHAP, and the latest 2024 amendments to the ITE Law, while secondary materials include international academic journals, digital forensic textbooks, and global AI governance reports that provide context for the technological legal gap. These materials are gathered through a systematic library search and analyzed using qualitative normative analysis. Through a process of deductive reasoning, the study applies foundational legal principles, such as the Presumption of Innocence and Due Process of Law to the technical challenge of deepfake fabrication. The objective of this methodological framework is to produce a prescriptive conclusion that outlines necessary reforms for the Indonesian judiciary, specifically the codification of AI specialized forensic protocols and a modernized redefinition of authenticity that can withstand the disruptive complexities of the digital era.

4. Results and Discussion

The Ontological Shift: From Manipulation to Synthesis

The primary finding of this research identifies a profound ontological shift in the nature of evidence that the Indonesian legal system is currently unprepared to handle. Traditional digital forensics is predicated on the Trace Theory, which assumes that any alteration to a digital file leaves behind a forensic trail be it metadata inconsistencies, pixel interpolation errors, or broken hash chains. However, Deepfake technology powered by Generative Adversarial Networks (GANs), operates on a different logic. In our analysis of Article 5 of the ITE Law, we find that the law assumes a Linear Chain of Custody where an electronic document is a fixed recording of a past event. Deepfakes disrupt this by creating a synthetic reality that never had an original physical counterpart.

The study finds that the Indonesian National Police's Digital Forensic Laboratory (Puslabfor) currently utilizes standard operating procedures (SOPs) based on ISO/IEC 27037. These standards are excellent for ensuring that a file found on a hard drive is the same file presented in court. However, they are completely silent on whether the content of that file was generated by an AI. Our findings suggest that a deepfake video of a public official committing a crime could pass all current Indonesian forensic hurdles, it would have a valid hash, consistent timestamps, and no signs of editing in the traditional sense, because the AI generated the file as a perfect whole. This represents a catastrophic failure of current evidentiary safeguards, as the law validates the container while the content is a fabrication.

The Psycholegal Barrier: Visual Supremacy and Judicial Discretion

A significant portion of our results centers on the Visual Supremacy Effect within the Indonesian judiciary. Under the KUHAP (Article 184), the judge has the discretion to weigh evidence based on their conviction. Our analysis of recent case law involving digital evidence suggests that Indonesian judges grant disproportionate weight to video recordings, often treating them as absolute truth. This psychological bias is a remnant of the pre AI era where seeing was believing. In the context of deepfakes, this bias becomes a judicial liability.

The study explains this phenomenon as a Cognitive Legal Lag. While the technology to deceive the human eye has advanced exponentially, the judicial methodology to evaluate such deception remains stagnant. We found that in many provincial courts across Indonesia, there is a total absence of evidentiary skepticism regarding AI. If a prosecutor presents a video, the defense is often ill equipped to challenge its technical authenticity, leading to a situation where the judge's conviction is built upon a foundation of algorithmic shadows. This find emphasizes that the threat of deepfakes is not just technical, but deeply rooted in the psychological fabric of how justice is adjudicated in Indonesia.

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The Liar's Dividend and the Erosion of Legal Certainty

One of the most complex phenomena identified in this discussion is the Liar's Dividend. As the public becomes more aware of deepfakes, the paradox is that real evidence becomes easier to dismiss. In our review of high-profile political cases in Indonesia, we observed a rising trend where defendants claim that incriminating but authentic videos are AI generated fabrications. This creates a state of Legal Nihilism, where the prosecution can no longer prove a fact beyond a reasonable doubt because the mere possibility of a deepfake introduces a permanent shadow of doubt.

This phenomenon is explained by the collapse of the objective baseline in Indonesian criminal trials. If the court cannot definitively distinguish between a captured truth and a synthesized lie, the Standard of Proof in criminal cases, in *dubio pro reo* (when in doubt, favor the accused) could be exploited by actual criminals to escape justice. Conversely, it could lead to the opposite extreme: a Post-Truth Courtroom where no digital evidence is trusted, effectively stripping law enforcement of one of its most powerful tools for modern investigation. This study argues that the Liar's Dividend is currently a hidden virus within the ITE Law, waiting to be activated in any high stakes litigation.

Comparison with International Research: The Civil Law Vulnerability

When comparing our findings with international research, specifically from the United States and the European Union, a distinct vulnerability emerges in the Indonesian system. Western scholars like Danielle Citron emphasize the role of Adversarial Expertism and jury instructions to mitigate deepfake risks. However, Indonesia's Civil Law tradition places the judge as the Ultimate Finder of Fact. This centralization of power means that if a single judge is deceived by a deepfake, there is no jury to provide a collective reality check.

Furthermore, unlike the EU AI Act, which is moving toward mandatory labeling of AI-generated content, Indonesia's 2024 ITE Amendment focuses more on content moderation and fake news rather than the technical provenance of evidence. Our comparison reveals that Indonesia is lagging in Regulatory Proactivity. While other jurisdictions are experimenting with Controlled Capture technologies (where cameras use blockchain to sign videos at the moment of recording), Indonesia remains stuck in a reactive mode, attempting to detect fakes after they have already entered the judicial stream.

The Epistemological Crisis in Indonesian Legal Education

The discussion further posits that the deepfake crisis is a symptom of an underlying epistemological crisis in Indonesian legal education. Most law faculties in Indonesia teach Evidence Law as a set of static rules from the 1980s. There is a profound lack of interdisciplinary training that combines Law and Computer Science. As a result, the explanation for why deepfakes are so dangerous in Indonesia is the Technological Literacy Gap among judicial actors.

During our research, interviews with legal practitioners suggested that many believe digital forensics is a magic bullet that can solve all problems. They fail to realize that AI-Forensics is a game of probability, not certainty. A forensic report might say there is an 80% probability of AI generation, but the Indonesian KUHAP requires certainty. This mismatch between the probabilistic nature of AI detection and the binary nature of legal truth creates a vacuum where justice can easily slip through. The explanation here is that the law is looking for a yes or no answer in a world that AI has turned into a gradient of grey.

Sociological Implications: Public Trust and Social Media Courts

The sociological impact of deepfakes on the Indonesian legal system cannot be overstated. In the era of viral justice, where cases are often tried in the court of public opinion on TikTok or X (Twitter) before they

reach a courtroom, deepfakes can trigger mass social unrest. If a deepfake video of a religious or political leader is widely believed by the public, a subsequent court ruling declaring it fake may be viewed as a government cover-up.

This creates a Judicial Legitimacy Crisis. The explanation for this is the speed of information versus the speed of law. A deepfake can go viral and influence millions in minutes; a court-ordered forensic analysis in Indonesia can take months. By the time the legal system provides a verdict on reality, the social damage is already done. This study finds that deepfakes act as a catalyst for Social Polarization, where the truth of a piece of evidence is determined by one's political affiliation rather than scientific fact.

The Forensic Arms Race: Technical Limitations in Indonesia

Our discussion enters the technical domain by analyzing the forensic arms race. Current deepfake detection techniques, such as looking for abnormal blinking, unnatural skin texture, or checkerboard artifacts are being rendered obsolete by newer models like Sora or advanced GANs. For the Indonesian forensic community, this is a daunting challenge. Most local police stations lack the high computational power required to run state of the art detection algorithms.

The explanation for this technical deficit is Resource Centralization. While the central laboratory in Jakarta may have advanced tools, the regional courts (Pengadilan Negeri / PN) across the archipelago operate with very basic technical support. This creates an Inequality of Arms; a wealthy defendant could hire a private expert with advanced AI detection tools, while a poor defendant or a local prosecutor would be left defenseless against a sophisticated deepfake. This study concludes that digital justice in Indonesia is currently a matter of geographic and financial privilege.

Toward a Provenance Based Legal Reform

The synthesis of these eight points leads to a Preliminary Conclusion that the Indonesian legal system requires a radical procedural reboot. We cannot continue to treat digital evidence as a document. It must be treated as a dynamic system. The ITE Law must be updated to include a Mandatory AI Verification Clause for all digital media involving criminal sanctions above five years.

Furthermore, we conclude that Indonesia must lead the way in authenticity by design. This means moving the legal focus from detection to provenance. We recommend that the Indonesian Ministry of Law and Human Rights explore a National Digital Evidence Blockchain, where all law enforcement bodycam footage and official recordings are hashed and timestamped on a decentralized ledger. This would create a verifiable path of truth that no AI could replicate. Without such a leap into the future of legal technology, the Indonesian criminal justice system will remain a 20th century ship lost in a 21st century storm of digital lies.

5. Conclusion

The digital transformation of the Indonesian criminal justice system has reached a critical juncture where the traditional seeing is believing paradigm has been rendered obsolete by the advent of Generative Artificial Intelligence. This study concludes that the current Indonesian legal framework, specifically the ITE Law and the Criminal Procedure Code (KUHAP) is fundamentally ill equipped to address the ontological challenge posed by deepfakes. The core of the crisis lies in the fact that our laws are designed to detect manipulation (the alteration of an original), whereas deepfakes represent synthesis (the creation of a new, fabricated reality). This ontological gap allows AI generated evidence to possess technical integrity (valid hash values and metadata) while conveying a total falsehood, thereby bypassing the existing forensic safeguards of the Indonesian judiciary.

Furthermore, the research highlights a dangerous Technological-Legal Lag within the Indonesian judiciary. Judges, acting as the ultimate finders of fact, are susceptible to the visual supremacy effect, where the psychological persuasiveness of a high-fidelity video can lead to judicial errors or the wrongful conviction of innocent individuals. Conversely, the rise of the Liar's Dividend creates a climate of legal nihilism where authentic evidence can be easily dismissed as AI generated, undermining the state's ability to prosecute serious crimes. Without a radical shift from file integrity to reality provenance, the Indonesian justice system risks a total collapse of public trust, where the truth in a courtroom is determined by algorithmic sophistication rather than material fact.

To safeguard the integrity of the Indonesian criminal justice system against the disruptive tide of AI, the following Policy Recommendations are proposed for the Ministry of Law and Human Rights, the Indonesian National Police, and the Supreme Court:

1. Legislative Reform: Amending the KUHAP and ITE Law

Mandatory AI Verification Clause: The government should amend the KUHAP to include a mandatory requirement for an AI-Provenance Report for any digital evidence involving crimes with a threat of imprisonment over five years. Legal definitions in the ITE Law should be updated to distinguish between captured electronic information and synthesized electronic information, placing a higher burden of verification on the latter.

2. Technical Infrastructure: Establishing a National AI Forensic Protocol

Decentralized Provenance Ledger: Indonesia should implement a National Digital Evidence Blockchain. All law enforcement bodycam footage and official state recordings must be hashed and timestamped on a decentralized ledger at the moment of capture to ensure a verifiable chain of truth. The National Police (POLRI) should move beyond general digital forensics and establish specialized AI-Forensic Units equipped with RPPG (Remote Photoplethysmography) and semantic consistency analysis tools to detect deepfakes.

3. Judicial Capacity Building: Bridging the Literacy Gap

AI Literacy Certification for Judges: The Supreme Court (Mahkamah Agung) should mandate AI-literacy training for all judges presiding over criminal cases. This training should focus on the Liar's Dividend and the probabilistic nature of AI detection to ensure that conviction is based on scientific skepticism. Expert Witness Standards to establish a national registry of certified AI Forensic Experts to prevent the use of pseudo-science in the courtroom and ensure that expert testimony meets international technological standards.

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