

**Digital Evidence in Criminal Trials: Challenges in Adversarial vs. Inquisitorial
Systems**



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Abstract

This paper examines how digital evidence is handled in criminal trials within adversarial and inquisitorial legal systems. It compares the two models in terms of evidence collection, admissibility standards, and the role of judges and lawyers in evaluating digital material. Key issues such as chain of custody, authenticity, privacy concerns, and procedural fairness are analysed through relevant case law and legal commentary.

The paper argues that while both systems face shared technological challenges, their structural differences shape the legal treatment and reliability of digital evidence in distinct ways. Recommendations for procedural reform and international cooperation are proposed.

Keywords

Digital Evidence, Criminal Trials, Adversarial System, Inquisitorial System, Comparative Criminal Procedure

1. Introduction

The increasing reliance on digital evidence — such as emails, text messages, metadata, and CCTV footage — has transformed modern criminal litigation. Legal systems rooted in different procedural traditions face the shared challenge of adapting evidentiary rules to rapidly evolving technology.

This paper critically examines how adversarial and inquisitorial systems approach digital evidence in criminal trials. It aims to highlight how their structural differences affect evidentiary reliability, procedural safeguards, and the fairness of outcomes.

2. Thesis Statement

Whereas both systems grapple with common challenges posed by digital evidence, the adversarial model's emphasis on party-led proof and cross-examination contrasts sharply with the inquisitorial focus on judicial investigation, resulting in differing levels of scrutiny, admissibility, and evidentiary control.

3. Digital Evidence in Criminal Law: An Overview

- Definition: Digital evidence refers to information stored or transmitted in digital form that may be used in court.
- Types: Emails, social media, GPS data, hard drive contents, cloud storage, etc.
- Legal Challenges: Volatility, authenticity, data manipulation, encryption, jurisdiction.
- Case Example: *R v. S(BC)* [2003] (UK) – admissibility of text messages as evidence.

4. The Adversarial System and Digital Evidence

4.1 Key Features:

- * Parties control evidence presentation
- * Judge acts as a neutral arbiter
- * Heavy reliance on cross-examination

4.2 Challenges:

- * Difficulties in verifying digital evidence authenticity through oral testimony
- * Limited judicial oversight during investigation
- * Rules of admissibility (e.g. hearsay, best evidence rule)

4.3 Relevant Case:

- *United States v. Ganius* (2014) – issues around data retention and privacy under the Fourth Amendment.

4.4 Critical Point:

- Adversarial systems may exclude technically valid digital evidence due to procedural technicalities.

5. The Inquisitorial System and Digital Evidence

5.1 Key Features:

- * Judge leads the investigation
- * Evidence is gathered before trial
- * Focus on written records and dossier system

5.2 Advantages::

- * Judges may better assess digital relevance earlier in process
- * More room for expert evaluation during pre-trial

5.3 Challenges:

- * Risk of limited cross-examination
- * Potential over-reliance on prosecution-collected digital evidence

5.4 Example:

- French and German procedural approaches to encrypted devices and forensic imaging.

6. The Inquisitorial System and Digital Evidence

FACTOR	ADVERSARIAL	INQUISITORIAL
Evidence Control	Party-Led	Judge-led
Expert Role	Hired by parties	Court-Appointed
Chain of Custody	Highly scrutinize in Court	Handled earlier, often internally
Risk of Exclusion	Higher	Lower
Transparency	High in Court	Higher in investigation

6.1 Key Insight:

- Adversarial systems may better protect rights through open contest, but may also risk excluding critical evidence. Inquisitorial systems benefit from early assessment but may lack procedural openness.

7. Cross-Cutting Challenges and Reforms

- Chain of custody and tampering
- Cloud storage & jurisdiction issues
- Use of AI and algorithmic tools
- Right to privacy vs. need for evidence

8. Recommendations:

- Harmonizing digital evidence standards across borders
- Training legal actors in tech-based forensics
- More judicial guidance on authenticity and metadata

9. Conclusion

Both adversarial and inquisitorial systems face growing pressures to adapt traditional evidentiary principles to digital realities. The adversarial model prioritises party autonomy and cross-examination, which may exclude or weaken digital evidence without proper technical understanding. The inquisitorial model offers stronger judicial control but may overlook adversarial safeguards. This paper has argued that a hybrid approach — incorporating judicial expertise and adversarial protections — may best ensure fairness and reliability in digital-age criminal trials.

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