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Standards for Digital Evidence

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Propositions

1. The investigation stage of the criminal proceedings becomes more pro-active, technology-driven, and outcome-determinative which imposes challenges to the fair trial and to the reliability of the digital evidence. *Chapters I and III*

2. The right to a fair trial, as codified in Article 6 ECHR, remains a rich source for the development of a cross-jurisdictional and cross-disciplinary digital evidence governance model in criminal investigations. *Chapter II*

3. The transposition of a fair trial guarantees into the digital domain depends on addressing the following theoretical gaps: *(i)* insufficient recognition of evidence rules as universal expression of fair trial principles; *(ii)* the need for a more prominent interpretation of the right to a fair trial in the investigation stage of the criminal proceedings; and *(iii)* the broad and abstract evidence reliability standard in law which is hard to adapt to digital evidence. *Chapters II and III*

4. Digital investigations are led by operational and investigative objectives. They would benefit from more rigorous reliability validation procedures and consideration for the procedural guarantees and rights of suspects and defendants. *Chapters III, IV, and VIII*

5. A formal procedure for enabling digital evidence reliability validation is the most pressing need in order to integrate fair trial requirements, law enforcement needs, and digital forensics methodology. *Chapters I, IV, and V*

6. Digital investigations can benefit from a process-level standardization which ensures minimum documentation of the tool, method, and examiner work according to concrete reliability criteria. Such standard enables different types of reliability testing for the multitude of digital forensics methods and tools as opposed to "one-standard-fits-all" lab requirements. *Chapters V, VII, and VIII*

7. An ontology-based approach for machine and human – readable standard formats which can integrate and automate reliability validation process into the digital forensic investigation is favourable, as long as redundancy and overcomplexity issues are addressed. *Chapter VI*

8. A new digital right to procedural accuracy can be developed as a principle under Art. 6 ECHR in order to comprehensively address the significant impact of digital forensic science and technology on individuals' rights in criminal proceedings and to serve as a legislative anchor for a coherent reliability framework for digital evidence. *Chapters IX and X*

9. A *participatory model* of procedural justice is a suitable foundation for the right to procedural accuracy in digital investigations, as it seeks to overcome the limitations of balancing rights-based or trial-centric models by deliberately shifting towards early participatory rights of the defendant in the investigative phase, where determinative or quasi-determinative decisions are taken. *Chapter X*

10. The right to procedural accuracy should include *(i)* protection against unreliable digital evidence processing; *(ii)* the right to access to the chain of evidence, explanation, and forensic assistance; and *(iii)* the right to participate in the determinative stages of the digital forensic processing. *Chapter XI*