



MASTER FORENSIC SCIENCE – RESEARCH PROJECT

Title	: New Developments in Digital Forensic Expertise: Quality Standards and Alignment with Registration Requirements
Keywords	: Digital Forensics, Quality Standards, ISO 21043, NRGD
Forensic Expertise Area	: Digital Forensic Expertise
Start Date	: October 2025 (flexible)
Host Institute	: Netherlands Register of Court Experts (NRGD)
Department/Team	: Digital Forensic Expertise Committee / Bureau NRGD
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Short Description

Digital traces play an increasingly important role in criminal investigations and court proceedings, ranging from mobile devices and cloud storage to video and audio analysis. Over the past decade, several international standards and best practice guidelines have been developed to ensure the quality, reliability, and reproducibility of digital forensic investigations (e.g. ISO/IEC 27037, ISO 21043 series, OSAC standards, SWGDE and ENFSI Best Practice Manuals).

The NRGD is currently revising its assessment framework. Instead of subfields such as “software,” “network,” or “multimedia,” the evaluation of experts will be organized around forensic phases (Recovery, Analysis, Interpretation), similar to the structure of ISO 21043. At the same time, the NRGD intends to maintain a *vertical dimension* by distinguishing specific areas of expertise (e.g. malware, mobile devices, multimedia). This will possibly result in a matrix in which experts are evaluated on both their phase-related competencies and their topical focus.

This thesis will therefore not only review international standards and literature on digital forensics, but also explore how quality criteria and best practices can guide the definition of meaningful “areas of attention” within the three forensic phases. The student will compare these insights with the NRGD registration requirements, providing recommendations for structuring future assessments in Digital Forensic Expertise.

Key References

1. ISO/IEC 27037:2012 – Guidelines for identification, collection, acquisition and preservation of digital evidence.

2. ISO 21043-1:2018 & ISO 21043-4:2021 – Forensic sciences: terminology; interpretation.
3. NIST SP 800-101r1 (2014) – Guidelines on mobile device forensics.
4. ENFSI Best Practice Manuals (Digital Imaging, Audio/Video Analysis).
5. SWGDE Best Practices (2024) – Remote acquisition, cloud, video analysis.
6. OSAC Registry – Digital Evidence standards (NIST).
7. NRGD – Registration requirements for Digital Forensic Expertise.

Required/Recommended Skills and Expertise

- Interest in digital forensic science and quality assurance.
- Ability to conduct systematic literature reviews.
- Affinity with international standards (ISO, OSAC, ENFSI, SWGDE).
- Analytical skills to compare criteria across frameworks.
- Strong motivation and curiosity to work in an area where no established standards or clear frameworks currently exist.
- An adventurous mindset: willing to explore new concepts, deal with ambiguity, and contribute to shaping emerging structures in digital forensic expertise.

Visuals