



Forensic Engineering
Expert Witness Services



3rd Session: AI Validation and Validation of AI

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AI IN EXPERT EVIDENCE

Opportunity vs. Risk

AI Can Significantly Assist Experts:

- Large document review
- Chronologies & timelines
- Draft structuring
- OCR & data extraction
- Technical summarisation
- Translation support
- Cross-checking inconsistencies
- Early identification of missing information

But AI Also Creates Major Risks:

- Hallucinated references
- Incorrect standards / clauses
- Fabricated technical wording
- False confidence in outputs
- Overly polished but inaccurate analysis
- Loss of expert critical judgment

“Fluent language does not equal reliable evidence.”

THE CORE PROBLEM: AI SOUNDS CONFIDENT — EVEN WHEN WRONG

Real Issues Encountered in Practice

- Incorrect standard references
- Wrong clause numbers
- Non-existent quoted text
- Incomplete extraction from PDFs
- Invented technical explanations
- Misleading summaries of evidence

Why This Matters in Arbitration

- Expert credibility is critical
- One fabricated citation can undermine an entire report
- Tribunals expect traceability, verification and independent judgment

“The main risk is experts failing to independently validate AI outputs.”

HUMAN-IN-THE-LOOP VALIDATION

A Practical Framework for Experts

Every AI Output Should Be:

- Source verified
- Independently checked
- Traceable to evidence
- Reproducible
- Reviewed personally by the expert

Recommended Expert Approach

- USE AI FOR: Structure, efficiency, summaries, pattern recognition
- DO NOT USE AI FOR: Final opinions, unverified references, blind drafting

“The tribunal does not appoint AI as the expert witness. It appoints the expert.”

AI TOOLS FOR CONSTRUCTION DISPUTES

Key AI platforms that experts can use across the dispute lifecycle

1. GENERAL LLM / EXPERT ASSISTANTS		2. LEGAL / ARBITRATION AI TOOLS		3. DOCUMENT REVIEW / OCR / DATA EXTRACTION	
	ChatGPT (OpenAI) General expert assistance, report structuring, chronologies, coding, data review, summarisation		Harvey AI AI legal research, drafting, arbitration preparation, document analysis		Azure AI Document Intelligence OCR, invoice extraction, structured data extraction from documents
	Claude (Anthropic) Long-document review, legal-style reasoning, strong at complex analysis		LexisNexis AI Case law research, legal precedents, regulatory information		Google Cloud Document AI Large-scale document processing, classification and data capture
	Gemini (Google) Multi-modal analysis, spreadsheet and document handling, data interpretation		Spellbook AI AI-assisted contract drafting, review and comparison		ABBYY FlexiCapture Advanced OCR and data capture for engineering and technical documents
	Grok (xAI) Fast technical reasoning, real-time web-linked analysis, concise summaries		LegalOn Construction contract review, clause risk analysis, compliance checking		Kira Systems AI contract and document review, risk identification, obligation extraction
4. TRANSCRIPT / MEETING / HEARING ANALYSIS		5. CONSTRUCTION-SPECIFIC AI PLATFORMS		6. DATA ANALYTICS / CODING / FORENSIC REVIEW	
	Otter.ai Meeting transcription, summaries, searchable notes		Civils.ai Construction dispute documentation, project analytics, claim support		Python Custom analysis, data parsing, forensic calculations, automation
	Sonix Transcription (multilingual), testimony review, speaker ID		Buildots AI progress monitoring from site photos and footage		Jupyter Notebook Reproducible analysis, modelling, audit trails
	Fireflies.ai Meeting recording, AI summaries, action item extraction		OpenSpace Site capture, visual progress analysis, reality documentation		Microsoft Power BI Claims dashboards, data visualisation, KPI analysis
	Microsoft Copilot (Teams) Teams meeting summaries, key points and action tracking		Procore AI Construction management workflows, document and cost intelligence		Tableau Advanced data visualisation and dispute analytics

AI IS BEST USED FOR:

- Speed & Efficiency
- Organisation & Structuring
- Pattern Recognition
- Summaries & Drafting
- Large-scale Document Review
- Technical Assistance

AI SHOULD NOT REPLACE:

- Independent Expert Judgment
- Source Verification
- Technical Reasoning
- Professional Skepticism
- Final Expert Opinions

“ AI can assist the expert. But AI cannot assume the expert’s duty to the tribunal. ”

USE AI AS A POWERFUL ASSISTANT – ALWAYS COMBINED WITH EXPERT JUDGMENT, VERIFICATION AND ACCOUNTABILITY.