

# Computer Evidence Workshop. May 2 2025

## What constitutes *Sufficient Evidence of Dependability*?

In 2007 the US National Academies published a report **Software for Dependable Systems: *sufficient evidence*?**. This contained the findings and recommendations of an expert study, workshops and independent peer review, following the normal practice for such reports.

The study concluded that

- No system can be dependable in all respects and under all conditions. So to be useful, a claim of dependability must be **explicit**. It must articulate precisely the properties the system is expected to exhibit and the assumptions about the system's environment upon which the claim is contingent.
- For a system to be considered dependable, concrete evidence must be present that substantiates the dependability claim. Testing alone is usually insufficient to demonstrate the desired properties; for example, evidence will be required that the system is identical to the one that was tested.
- The required strength of the evidence will depend on the confidence that is required in the system; the likelihood of failures that is regarded as acceptable will depend on the consequences of those failures.

When evidence from a computer system is presented in court, some assumption must be made about its credibility. For electronic trade documents, the Electronic Trade Documents Act 2023 (ETDA) says that the document must come from a 'reliable system' that protected the document against unauthorised alteration.

The ETDA then says that when determining whether a system is reliable, the matters that may be taken into account include—

- any rules of the system that apply to its operation;
- any measures taken to secure the integrity of information held on the system;
- any measures taken to prevent unauthorised access to and use of the system;
- the security of the hardware and software used by the system;
- the regularity of and extent of any audit of the system by an independent body;
- any assessment of the reliability of the system made by a body with supervisory or regulatory functions; and
- the provisions of any voluntary scheme or industry standard that apply in relation to the system.

These rules have been enacted by Parliament to assure that commercial documents can be relied on as valid evidence in court. It appears that the same rules apply whether the evidence is being

presented in a civil or criminal case. The 'common law presumption' is disregarded and replaced by a requirement for concrete evidence of the reliability of the originating computer system(s) and the integrity of the evidence trail.

How far does this go? Would the PO Branch Accounts from Horizon be Electronic Trade Documents and follow these rules?

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