

Lead standards committee:	Rolling Stock - RST	Date:	
Support standards committee:	Plant - PLT	Date:	
Subject:	Five-year review of GEGN8607 issue two, Guidance on the Use of Escrow Agreements for Rail Applications		
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1. Purpose of the paper

- 1.1 This paper sets out the outcome of the five-year review of fitness for purpose for GEGN8607 issue two, *Guidance on the Use of Escrow Agreements for Rail Applications*. Standards committee approval and support is sought for the recommendation and way forward.

2. Background

- 2.1 GEGN8607 issue two five-year review follows its publication in March 2018 and 12-month review in March 2020.
- 2.2 An escrow agreement in this context is, typically, a tripartite agreement between a Licensee (for example, the asset owner), Licensor (for example, the original equipment manufacturer (OEM)) and an independent third party (usually the escrow agent), but can include additional parties in more complex situations. The escrow agreement is a legal agreement where specified intellectual property is put into the custody of an independent third party (referred to as an escrow agent) until specified conditions (typically referred to as release events) are fulfilled.
- 2.3 The document was published to provide guidance to the rail industry on the use of escrow agreements.
- 2.4 A 12-month review of GEGN8607 issue two was undertaken on 13 March 2020 and it concluded that the document remained fit for purpose and no proposals for changes were made. The review was presented and approved by Rolling Stock Standards Committee.

Impacts on the standard(s) following publication/entering into force

- 2.5 Consideration has been given to the following during this review:
- a Business case for change – The objective of RSSB Standards Project 17-028 was to revise GEGN8607 issue one to include escrow agreements with multiple intellectual property owners, by providing guidance on setting up individual escrow agreements. This objective was fulfilled through the publication of GEGN8607 issue two.
 - b Deviations – As this is a guidance note, deviations are not required so there have been no deviation applications.
 - c Current projects or proposals being processed – there are no proposals for change.
 - d Amendments and clarifications – no amendments or clarifications have been made.

- e Enquiries – There have been informal queries received from NCC Group regarding issues identified during the setting up and management of the escrow agreements. This proposal includes broadening the definition for escrow agreements to include elements of ‘knowledge transfer’ such as verification testing. The proposal also includes time frames to ‘re-test’ a minimum of reviews of the initial verification/knowledge transfer reports. The proposal also includes scenario testing, in the context of cyber security, but may be cost prohibitive, or considered non-proportionate to the risks presented. The list of proposed changes and updates is shown in Appendix A.
- f Research projects – there are no current relevant change projects on RSSB Standards Programme.
- g Regulations – No related regulation change has impacted the guidance note.
- h National technical specification notices (NTSNs) and European standards – recently updated ISO standard ISO/IEC 27001:2022 – requirement for software Escrow has reincluded escrow.
- i Changes in Technology – Developments in technology and the expanded use of online and cloud-based systems, especially on rail vehicles create new vectors and increased risk of cyber-attacks. This proposal includes scenario testing, which can used to identify these vectors and mitigate against cyber-attacks. The NCC group also proposes that the use of Cloud based escrow should be included in this proposal.
- j Are there any barriers to adoption? – there are no barriers to adoption.
- k Any other observations – there are no other observations.

3. Discussion

3.1 Review outcome

- 3.1.1 Based on the impacts listed above, it is considered appropriate to revise GEGN8607, primarily to address the recommendations put forward by the NCC Group. Additionally this opportunity can also be taken to address the following:
 - a Update guidance to address issues identified in Appendix A.
 - b Correct terminology definition listed in Appendix A.

4. Recommendations

- 4.1 Revise GEGN8607 to address the recommendations put forward by the NCC Group.
- 4.2 Standards Committees are asked to:
 - a Comment on the review.
 - b Approve / Support the recommendations.

RSSB completion: [\[do not delete\]](#)

Standards committee	Meeting date	Decision	Minute numbers		Next review date approved by the lead standards committee
			Pre-consultation review	Post-consultation review	
Rolling Stock		Approved			
Plant		Supported			

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Appendix A Summary of proposed changes by NCC Group

A.1 Summary of proposed changes

The summary of proposed changes by the NCC Group is set out in the following list:

1. Widen the definition of escrow to clarify that the escrow is not solely a legal agreement as the contractual element is the base layer for mitigation of risk. The "knowledge transfer" elements, also known as verification testing, are vital to every escrow solution as they provide the necessary understanding on how to use what is stored under the agreement itself.
2. Expand the purpose of escrow to a wider context than just business continuity, this includes:
 - a. business continuity
 - b. non-financial risk (NFR)
 - c. third-party risk management
 - d. procurement
 - e. new business and IT change
 - f. cybersecurity and IT disaster recovery (ITDR)
 - g. recovery and resolution planning (RRP)
 - h. controls
 - i. compliance
 - j. audit
 - k. legal
 - l. intragroup outsourcing
 - m. crisis management
 - n. asset management
 - o. supplier management
3. Obsolescence is the primary control function for escrow within both rail and defence. There is recommendation to set a "re-test" time frame that at a bare minimum reviews the output of the initial verification/knowledge transfer report to understand the process. In this scenario it is the availability of the fourth party/Nth party tools used in the construction of the application that present the risk long term. 40 years is a long time when considering the fourth party supply chain, ensuring the service can be rebuilt on newer versions or alternate fourth party services will become key as the lifetime of the railway product continues.

4. Including 'supplier failure, service deterioration and concentration risk' to clause G1.2.3 to align with terminology set in the recent UK National Risk register. This also apply to the events set out in G2.2.3.
5. To include review of the knowledge transfer and feedback into policies standards and procedures in the clause 1.2.4 c) validation of an escrow deposit agreement.
6. Single agreement for escrow is considered clearer and more easily enforceable, however come with increased cost for individual agreements. This led to reluctance to set them up, but this can be included in the guidance to clarify the benefits.
7. Add more points for clause G2.1.4 to include hardware details, software and tools, and key members of staff contact details.
8. To consider details of the escrow to include software move into cloud services.
9. It is worth outlining the benefits of escrow solution to the suppliers.
10. Add scenario testing into clause 1.2.4 as item d) for consideration and discussion. Scenario testing is widely used outside of rail, especially in Financial Services, but normally in the context of cyber security. Scenario testing is highly applicable to Rail escrow solutions but it may prove to be cost prohibitive, or considered non proportional to the risks presented.

A scenario test in escrow terms is a combination of a desktop and technical exercise. Essentially the end user's ability to cope with a supplier failure is tested. A mock release of code is performed, and the end user walks through the process of trying to stand up the service themselves, or, pulls in an unrelated 3rd party to try an stand the service up.

Scenario testing often identifies real world issues an end user experiences in handling the released material. Test environments in Rail could be the blocker here, I'd imagine they are expensive to set up and once the service has been live for some time I'd need to understand if there's any contractual requirement for the supply chain involved to keep the test environment available.

11. Expand G2.1 into three sections namely: escrow agreement, knowledge transfer and scenario test to better clarify the escrow solutions.
12. Add 'political instability of the supplier host nation, relevant environmental risk to the supplier host nation and supplier presents a concentration risk' in clause G2.4.1 to address frequent identified risk globally.
13. G2.4.4 would need to be updated to add a copy of the end users desired escrow contractual template and to set up the escrow agreement at the point of signature of the project.
14. List the benefit to the ownership of the IPR to G2.5.
15. Recommendations over deposit, including linking the deposit to payment, and the timing of the deposit.
16. Adding the definition of scenario test and verification / knowledge transfer to avoid misleading information.