RISSB Product Proposal (and Prioritisation)

RISSB
RAIL INDUSTRY SAFETY AND STANDARDS BOARD
ABN: 58 105 001 465

Primary information	
Type of product being suggested:	*Guideline*
Title of product being suggested:	*Cybersecurity for signalling interlockings*
Date of suggestion:	*March 2019*
Reason for suggestion:	*Cybersecurity for new designs and signalling and control systems is now well documented. There is a large installed base of computer/processor based signalling interlockings in Australia up to 20years old. Many of these where installed prior to cybersecurity frameworks being developed.*
Railway discipline area:	*Railway Signalling*

Objective:

This guide provides suggestions, methods and hints to applying modern cybersecurity measures to signalling interlockings and control systems installed up to 20years ago

Scope:

This guideline would provide information to allow an audit/review to be done of existing signalling interlocking/control system to ascertain the current threat exposure and to determine the risk/hazard profile. Many of the tools and techniques used in modern cybersecurity are not able to be implemented on older technology platforms. However there are a number of methods and basics that still can be applied: Documentation, physical security, isolation, intrusion monitoring, audits and check, maintenance tasks.

Depending on the technology, threat profile and risk appetite this guide will assist the owner of the signalling/control system asset to determine modifications for today and what may need to be done in the future until the signalling/control asset is decommissioned.

Hazard identification: *(what safety hazards would the proposed product seek to address)*

1	*Derailment and or Collision*	6	
2	*Damage to Rolling Stock and or Infrastructure*	7	
3	*Third Party Property Damage*	8	
4	*Injury or Death of an Employee*	9	
5	*Injury or Death of a third Party*	10	

Definitions

i A ***Guideline*** is a set of informative guidance. It is not normative but informative.

A ***Code of Practice*** is a set of descriptions. It is the "how" one can meet a higher-level requirement (either of a Standard, or a piece of Legislation). It is normative, but by its nature can contain several options about how to achieve compliance with the higher-level requirement. It can also have some informative guidance within it if it is more practical than writing a separate guideline.

A ***Standard*** is a set of requirements only. It is the "what" must be done to be claim compliance to the standard. It is normative. It can also contain optional and/or supplementary requirements, but they still should be worded as requirements.

Benefits: *(enter wherever applicable in below categories)*

Safety

Safety benefit as per cybersecurity standard

Interoperability / harmonisation

Financial

Will allow cost savings in maximising current asset life for signalling interlocking and control systems

Environmental

Efficient use of materials/assets.

Impacts:

Challenge to implement many modern cybersecurity methods on older technology platforms

Reference / source materials: *(This is very important; it will directly impact the tone/style/flavour of the product. It will also have an impact on the research we undertake and therefore impact timescales/cost. It may also be useful to identify reference / source materials that should be avoided.)*

#	Reference / source material	Available from
1	RISSB Cybersecurity documents https://www.rissb.com.au/wp-content/uploads/2017/10/AS-7770-Rail-Cyber-Security-V2.0-Public-Consultation.pdf	
2	https://www.transport.nsw.gov.au/industry/asset-standards-authority/find-a-standard/cybersecurity-for-iacs-baseline-technical	
3	https://www.irse.org/knowledge/publicdocuments/Cybersecurity%20in%20railway%20signalling%20systems.pdf	
4		
5		

Definitions

ii ***Interoperability*** is the ability of a process, system or a product to work with other process, systems or products (aka compatible systems through managed interfaces).
iii ***Harmonisation*** - the act of bringing into agreement so as to work effectively together (aka uniformity of systems).