RISSB

RAIL INDUSTRY SAFETY AND STANDARDS BOARD

Rail Cyber Security for Rolling Stock & Train Control Systems

Code of Practice

This Rail Industry Safety and Standards Board (RISSB) product has been developed using input from rail experts from across the Rail Industry. RISSB wishes to acknowledge the positive contribution of all subject matter experts and DG representatives who participated in the development of this product.

The RISSB Development Group for this Code of Practice consisted of representatives from the following organisations:

TfNSW	Advantgard	AQ Advisory
BHP	Rio Tinto	Rail Systems Australia
Aurizon	Koupatech	Sydney Trains
Downer Group	V/Line	Tobruk Security
Roy Hill	Bombardier Transportation Australia	Monash University

Development of this Code of Practice was undertaken in accordance with RISSB's accredited processes. It was approved by the Development Group, endorsed by the Standing Committee, and approved for publication by the RISSB Board.

I commend this Code of Practice to the Australasian rail industry as part of the suite of RISSB products assisting the rail industry to manage rail safety, improve efficiency and achieve safety outcomes through interoperability and harmonisation.

Deborah Spring
Executive Chair | Chief Executive Officer
Rail Industry Safety and Standards Board

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RISSB welcomes suggestions for improvements and asks readers to notify us immediately of any apparent inaccuracies or ambiguities, please contact us via email at info@rissb.com.au or write to Rail Industry Safety and Standards Board, PO Box 518, Spring Hill, QLD 4004, Australia.

RISSB product can be found at: http://www.rissb.com.au/products/.

Document Control

Identification

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Approval

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Contents

1 Introduction

1.1 Purpose

This Code of Practice (CoP) provides principles and practices to address the cyber threat and vulnerabilities associated with rolling stock and train control systems and supporting infrastructures. It additionally provides industry (rail transport operators (RTO), rail infrastructure managers (RIM), vendors and third parties) with requirements which will assist in progressing the maturity of cyber security risk management.

This CoP forms part of the Rail Cyber Security Framework which consists AS 7770 Rail Cyber Security (Ref A) and supporting guidelines (Ref B).

This CoP supports the rail industry in reducing its vulnerability to deliberate and non-deliberate cyber-attacks. It sets out the principles and general approach to cyber security with specific guidance for rolling stock and train control systems.

1.2 Scope

This document covers rolling stock and train control systems including:

a) rolling stock control systems;
b) rolling stock information systems;
c) rolling stock borne signalling systems.
d) data and voice communication systems;
e) onboard signalling systems;
f) remote conditioning monitoring systems.
g) signalling systems;
h) level crossing monitoring systems; and
i) traffic management systems.

NOTE: Although this CoP is intended for rolling stock and train control systems, the principles outlined within this CoP can also be adapted for:

1. other rolling stock and train control systems;
2. other systems within the infrastructure domain encompassing rail operations and communication systems.

1.3 Terms and definitions

AS 7770 provides definitions of terms which for consistency will be used in this CoP. Descriptions of systems under consideration (SuC) in this CoP are detailed in section 2.

1.4 References

1.4.1 Normative references

The following documents are referred to in the text and have been referred to in such a way that some of their content forms requirements for this CoP: