RISSB Bites
Network and Train Readability

Standardising the approach to network specific operations in relation to running trains (i.e. line speeds, signal spacing, crossover points, etc)

Is There Such a Thing as a Standard Layout?

Imagine you were in a planning role in a railway on the east coast of Australia, when an opportunity arose that would allow you to move into a similar role on the west coast – and you needed to be able to transition quickly so you could hit the ground running…

Our nation's individual railways have evolved to do things differently for many reasons – and it is these differences that make moving between railways a sometimes tricky or difficult thing to achieve, with it sometimes being impossible in the short term.

RISSB's aim is to try and facilitate the levelling of the playing field with the introduction of Australian railway Standards to lead the way into a harmonious rail future – one in which people and rail traffic can move seamlessly from state to state and railway to railway without having to switch rulebooks and methods of operations.

Signal and Movement Authorities

In the train driver's interface there are two main type of lineside signalling used – route signalling and speed signalling. Australia is lucky enough to have a great variety of each across the country and in the dark territory world there is also a number of different systems – all of which require system specific knowledge and/or train-borne hardware to correctly address.

In the utopian environment a train driver would know that a signal aspect displayed to them has a particular meaning and that they need to react in a certain way to the following signal aspects as they progress on their journey – or should this be the norm?

(In the world of country railways that operate with movement authorities), should a train driver have to change safeworking systems at railway boundaries – purely because the rail steward has decided to install a different version of the system to their neighbour?

In the end, this places a lot of responsibility on the shoulders of the train driver – and in this era of technology advancement, should we not be driving towards a common operating platform for the movement of trains in multiple networks?

Signal Spacing

Lineside signalling systems are planned to include a safety margin or 'overlap' – in its most simple form this is to take into account the possibility of a train not being able to stop at a red signal. Some systems are still tied to this distance being equal to the train with the worst braking characteristics, plus a safety margin – and then add the gradient into the equation. Whereas others have adopted a more standardised approach of a fixed distance overlap. The resultant is considerable differences in how signals can be spaced and laid out – especially on the approach to junctions or platforms – in different railways.

Signal engineers tend to have a collective appreciation of the risks associated with the movement of rolling stock, and the importance having safe network operations. By levering off these attributes, and by bringing these subject matter experts together to work collaboratively, now might just be the time to challenge the different current accepted practices with the aim of starting to align at least some of the fundamentals of "signalling the layout" – so that an industry wide, consistent approach can be adopted.

Where to From Here?

Although we still rely heavily upon our experienced and highly respected railway subject matter experts, RISSB are now authoring many more Standards, Codes of Practice, and Guidelines in-house and thereby reducing our reliance on externally contracted expert resources.

The aim is to get a product that better fits the needs of the industry, and one which places a higher emphasis on the suggestions and inclusions of the Development Group members - a win-win situation for everyone.

Register for RISSB communications to be in touch with what RISSB is doing, see what developments are on the horizon, discover where you can contribute to a development group, and help us to collectively and collaboratively deliver great rail industry outcomes.

About RISSB

We develop and maintain the Australasian Rail Industry Standards, Rules, Codes of Practice and Guidelines.
Our vision is to be the trusted leader in the rail safety co-regulatory environment, providing products and services that enhance safety and efficiency.

Learn More

If you want to know more, visit the RISSB website, or email info@rissb.com.au

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