

IN THIS ISSUE

	Page
Reverse Engineering	2
<i>Richard Genner and Paul Carney</i>	
Managing obsolescence of electronic equipment in Signalling	11
<i>Ian Mitchell on behalf of the IRSE International Technical Committee</i>	
IRSE Seminar: Communications Based Train Control	13
<i>Alan Rumsey</i>	
Industry News	14
Signalling Before World War Two	15
<i>Albert Raymond Brown</i>	
On the Move: Appointments at Crossrail	16
Obituaries: Howard "Buster" Worsley and Peter Scott	17
IRSE Matters	18
Signals are Key: a report on the paper given to the IRSE Dutch section in February 2011	18
York Section: 'Smartlock and its Applications'	20
Midland & North Western Section: 'Cambrian Lines ERTMS- Technical Solution'	21
Education for Engineering: 'Careers education - young people deserve better'	22
Curiosity Corner	23
Feedback	23
IRSE Licensing in Taiwan	24
Membership Matters	25
Recruitment	<i>outside back cover</i>

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As each top safety issue is addressed, another rises up the list to replace it. Such is the case now for level crossings. This is not to say that the signal engineer has ignored the interface at grade between rail and road until now. Far from it, the last 50 years has seen continual innovation and improvement but now, with faster trains in an age where busier roads are used by an ever time pressed public, level crossings are a pre-eminent danger.

This danger is always brought to our attention following an incident, and there have been a few high profile cases in recent times. The railway company is always implicated because it is they who dissect the road or footpath and they who are responsible for providing adequate protection arrangements for the users, despite the evidence that it is invariably the public user who precipitates most incidents. I say incidents, not accidents, because it is usually human action that is the origin of the event.

Where road drivers are the cause then really these are road traffic incidents that just happen to involve a train, in the same way that a vehicle might hit a safety barrier, mount a pavement or plunge through a hedge. However, it's always reported that the train hits the vehicle as if the train is the rogue.

So is it right that the user takes all the blame, after all there are instructions and legislation for them to abide by and regulations which dictate the protection provided? Well, I think not. We should no longer hide behind the rules which legitimise our technical solutions because these do not account sufficiently for the human animal that is the user.

Consider the following sample statements:

- A crossing is safe because we exhibit red lights to the user;
- An automatic half barrier crossing is safe because users are told not to dodge around the half barriers;
- An automatic half barrier crossing is safe because a train at line speed is already too close to stop when the warning sequence is initiated;
- A user-worked crossing is safe because users always close the gates behind them;
- A user-worked crossing with a telephone is safe because the user will always seek permission to cross and the signaller will only give such permission when no train is approaching;
- A CCTV monitored crossing is safe because the signaller will always spot anyone trapped between the barriers before pressing the "crossing clear" button.

We have put many controls in place to reduce the possibility of a train reaching a crossing that is still open to traffic but some of these rely on human actions and then what is there in place to prevent road users entering the crossing when a train is about to pass? Rules are obeyed by the majority, ignored by some, forgotten momentarily by others but, above all they are nebulous, they can be indiscernible and they are directed at fallible humans. During 2010 there were 3446 incidents of crossing misuse in the UK alone, and these are just the one's we know about. Are enforcement and behavioural change really the answer to this problem or should we provide solutions that do not require the first and which take account of the second?

J.D. Francis