# TECHNICAL MEETING

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# Modern computer-based signalling technologies - So where is it exactly?

Presented by
Dominic Taylor

## Tuesday 16 September 2025

### Venue: 197 Blackfriars Road, SE1 8NJ

### Commencing at 5:30pm BST

**Talk synopsis**

Modern computer-based signalling technologies, such as Communication Based Train Control (CBTC) and European Train Control System (ETCS), offer great benefits in terms of capacity, resilience to perturbation and traffic management. Using pseudo-continuous analogues of speed and distance, they enable more precise monitoring and regulation of train movements than is possible with the binary stop-go controls of their predecessors. To do this they require far more detailed and precise representations of infrastructure than earlier signalling technologies.

Accompaying the article of the same name, published in the March edition of IRSE News, this presentation will explain why the seemingly simple task of describing where items of infrastructure are located is harder than it seems. It offers solutions for overcoming the challenges as well as guidance on eliciting data requirements for electronic representations of infrastructure.

**Speaker biography**

Dominic is a Chartered Engineer with a masters degree in Electrical & Information Science from Cambridge University and an MBA from HEC Paris. He has twenty years' industrial experience focused on the introduction of new technologies in the railway domain including the early use of video processing to survey railway infrastructure, automatic train protection, in-cab signalling and the world's first deployment of automatic train operation on a passenger main line. He has also worked on feasibility studies for self-driving buses and led the pioneering application of formal verification to railway interlockings. He now runs his own company, C?nsilium Aqu?s Sulis, which provides independent expertise in railway engineering, safety risk management, compliance, technical innovation, strategy, benchmarking and feasibility assessment.