



APTA SE + INCOSE TWG + INCOSE UK RIG
2021 Joint Monthly Membership Meeting & Webinar Series

Thursday, June 17, 2021

7:30-8:30pm BST, 8:30-9:30pm CEST, 2:30-3:30pm EDT, 1:30-12:30 CDT

Mathematical Modelling

Dominic Taylor, SYSTRA Scott Lister

Silas Benson, Frazer-Nash

Abstract

Good decision making is key to successful project execution and investment decision-making. Modelling, when underpinned by robust data and assumptions, provides an excellent mechanism for examining candidate decisions in an unbiased, repeatable, and evidence-based manner. It reduces the need to rely on unsupported intuition for critical decisions and allows the impact of assumptions underpinning those decisions to be assessed. Modelling can sometimes be ignored as a decision-making support tool due to a perception of high cost/effort or the fear of 'garbage in garbage out.' The perception of high cost/effort holds true if a traditional bottom-up approach is taken to a modelling activity, where each aspect of the model is built to provide an in-depth representation of the world. Similarly, 'garbage in garbage out' can result if assumptions are not adequately documented and modelling outputs quoted out of context. However, this is not the only approach to modelling. Taking a top-down view to discover the Minimum Viable Product model representation of a given scenario can be low cost, low risk, and helps add definition to many unwritten assumptions, and provides insight into areas where assumptions can be made with low and high confidence.

Biographies

Dominic Taylor is the technical head of Systems and Signalling at SYSTRA Scott Lister. He has fifteen years' railway signalling experience with a focus on the introduction of new technologies into the sector including formal verification, ETCS, traffic management, video surveying and novel data management techniques.



Silas Benson is a senior member of Frazer-Nash's AI & Analytics group and is responsible for leading delivery of bespoke software tools to clients in the Transport, Energy and Defence sectors. Silas' has expertise in developing rapid prototype models using Python and is an advocate for incorporating software engineering best practice from the DevOps and Agile movements into traditional engineering environments.



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Feb	Mar	Apr	May	Jun	Jul	Aug
18	18	15	20	17	15	19

Joining the Webinar



Please refer to the meeting notice on the next page for call-in information.

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