DESCRIPTION

This book presents real-world examples of formal techniques in an industrial context. It covers formal methods such as SCADE and/or the B Method, in various fields such as railways, aeronautics, and the automotive industry. The purpose of this book is to present a summary of experience on the use of “formal methods” (based on formal techniques such as proof, abstract interpretation and model-checking) in industrial examples of complex systems, based on the experience of people currently involved in the creation and assessment of safety critical system software. The involvement of people from within the industry allows the authors to avoid the usual confidentiality problems which can arise and thus enables them to supply new useful information (photos, architecture plans, real examples, etc.).

ABOUT THE AUTHOR

Jean-Louis Boulanger is currently an Independent Safety Assessor (ISA) in the railway domain focusing on software elements. He is a specialist in software engineering (requirement engineering, semi-formal and formal method, proof and model-checking). He also works as an expert for the French notified body CERTIFER in the field of certification of safety critical railway applications based on software (ERTMS, SCADA, automatic subway, etc.). His research interests include requirements, software verification and validation, traceability and RAMS with a special focus on SAFETY.
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