Preface

Motivation

I have often been asked over the last decade, or so, 'Can you recommend a book on GSN?' My answer has always (well, up to now at least) been, 'No'.

This was not because I found all such books unworthy; rather it is because I had not found any books on the subject. When someone asked me the question just after I had given a tutorial on GSN, I gave my stock answer. They came straight back and said that I should write one.

So, after much delay, here it is.

This book is both for the aspiring writer of arguments in GSN and for those who wish to read, review and understand them. It presents a clear exposition of the notation; it is a narrative, starting from first principles and showing why each symbol is needed and how it should be used. Each chapter builds on what has gone before. This is not a learned dissertation; it is a practitioners' guide to GSN, the Goal Structuring Notation.

Important Notes

The purpose of this book is to give an introduction to the Goal Structuring Notation and its use in representing arguments. It does not present any ready-to-use arguments for redeployment elsewhere. In particular, it does not present any safety arguments for re-use. A safety argument depends not only on the detail of the thing argued about, but also upon the environment in which it is used. A safety argument requires careful thought and analysis of the pertinent risks. If you ever re-use parts of such arguments, or claim benefit from someone else's argument, add an explicit justification of why you think it is appropriate for use in the new context.

The graphic illustrations appearing in this book are conceptual and were developed strictly to support discussions in the text. They are not intended to be used as the basis of assurance arguments. A number of the examples refer to legislation or to regulatory requirements, but note that this book does not offer legal advice; neither does it recommend means of compliance.

The author of this book, his past and present employers and clients, and his publishers share neither liability nor responsibility for any loss or damaged caused, or alleged to have been caused, by information obtained from this book.

Acknowledgments

The Goal Structuring Notation was formalised for use as a means of presenting safety arguments by Tim Kelly at York University.

Dr. Kelly is still supervising GSN development by his students and colleagues, both at York University and in industry. He has a web-page listing his many publications on the topic at http://www-users.cs.york.ac.uk/~tpk/.

I largely based the extended example of Chaps. 10, 11 and 12 of this book on a presentation that I gave on 20th January 2009 to the Solent Branch of the Safety and Reliability Society, SaRS, http://www.sars.org.uk/. Thank you to them for giving me the opportunity to judge the interest in this topic and to see if the example was straightforward enough to be illuminating without being so simple as to be dull. Note: I am indebted to The South Downs Planetarium and Science Centre in Chichester, UK, for introducing me to the subject of this example. They have a web-site at http://www.southdowns.org.uk/sdpt/.

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