

*Human Factors in Safety-Critical Systems*, Eds. Redmill F, Rajan J; Butterworth-Heinemann 1997, 320pp, 45, ISBN 0 7506 2715 8.

This book comprises a series of chapters by invited authors within a framework imposed by the editors. The coverage is very wide: with chapters arranged into sections: Safety-critical systems and human reliability; Human computer interaction; Socio-technical considerations.

It is suggested that the book is required by managers and practitioners in software engineering, safety engineering, human factors and management. What the book does set out to do is describe a set of concepts that are pertinent to an understanding of human factors in industrial situations where computer based systems are involved with safety. It thus gives an overview of human error, describes some human reliability assessment techniques, looks at specification and interface design, describes relevant aspects for helping operators and discusses some of the things that can go wrong.

Overall the chapters are well written and reasonably easy to follow, they do however tend to be individual pieces which aren't particularly well linked with each other. As such the various chapters describe particular views of individual topics. The book develops something of an explanatory feel with each author, in turn, coming in with a description of their particular topic. As a means for gaining an overview of these areas the book fulfils a useful role. Where it probably is less successful is in portraying a critical view of the way human factors is being used in safety. Thus each author presents their topic, of which they tend to be strong proponents, but there is very little talk about evidence for the validity of the approaches and little discussion on the practical limitations of techniques. One could come away with the impression that all these techniques are well accepted and should be widely adopted, rather than gaining an insight into the debates that are on-going within the safety-critical systems world. There is little discussion on the quantity and quality of data on the human role in accidents, or how information on situations in one industry can be applied to another.

Notwithstanding these limitations, which are common in books produced by collecting chapters from a variety of authors, I found the book to be informative and sufficiently well put together to provide someone who wants more than a brief introduction to the area with a useful set of information.

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