It is an honour to have been invited to write some words of introduction to this unique book. The authors and the publisher initially, somewhat graciously, suggested that this Foreword could be of sizeable length but the writer is of the view that you, the prospective reader, would rather move on to the meat of the text than spend a great deal of time reading this introductory commentary!

The authors have taken, as the basis of their book, a Personal Event Detector, or PED, which is a device for cardiac monitoring. In the first instance, this could be applied to individuals with certain forms of heart disease who are at higher risk of a cardiac event and who stand to benefit from this technique. Given the concept of sudden cardiac death in hitherto apparently healthy individuals, there might even be a case for suggesting that the whole population over a certain age should be continuously monitored, although this is really futuristic.

The authors have cleverly built the various sections of the book around various aspects of how a PED can be developed and utilised. This then allows a wide ranging review of the concept from the obvious generation of an electrocardiographic signal, through recording, analysis and interpretation to the point where an automated warning of an unusual finding can be transmitted to a central clinic where appropriate action can be initiated. The more sociological aspects of the concept are considered, including how such a technique could be funded through to the consequences of having a global system for cardiac surveillance.
Within each section of the book, the reader will find a review of relevant techniques and references to important publications and guidelines in the area under discussion.

The authors themselves suggest that the book should be of interest to researchers and manufacturers working in the field of cardiovascular monitoring, physicians/cardiologists with an interest in telemedicine, administrators interested in the future development of home care technology and finally, students of biomedical engineering. While there is the occasional section dealing with some of the more mathematical aspects of signal processing, the book is highly readable for the non mathematician. Thus, the text is very clearly within reach of a wide spectrum of readers.

The authors take an interesting look back at their childhood of the 60s at which time they looked ahead to the 21st century with many thoughts of “spacemen” and impressive communications throughout the universe. While some of these concepts might have been considered speculative at that time, they are nowadays reality. Similarly, there might be a degree of scepticism at the present time about the concept of Personal Event Detectors and the thought of many individuals being monitored centrally, with concern over false alarms and how a central monitoring station could handle multiple events occurring within a relatively short space of time. However, it might be as well to take the long view and think how the population of 2050 will be treated medically. The PED could be built today but nanotechnology enhances the prospects for development of extremely small, cheap PEDs capable of all of the functions discussed in this book. This writer does, however, wonder how increasing numbers of elderly individuals, with consequent increase in requirements for monitoring, could be handled in a realistic way. However, a lot can happen in 40 years and perhaps even the much talked about Polypill will reduce the problem of premature death from coronary heart disease though on the other hand, it might simply postpone such events without obviating the need for monitoring.

The information provided in this book will enable the reader to draw his or her own conclusions about the techniques involved in event monitoring and reach a personal conclusion as to its merits.

I would congratulate the authors on their novel approach to producing this text and on bringing together a wealth of information in the field. I am delighted to recommend this book to those potential readers previously listed – not to mention medical administrators and politicians who ultimately might be called upon to consider whether or not to provide the funding to support the concept.

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Glasgow, Summer 2008.