

Preface

नियतं सङ्गरहितमरागद्वेषतः कृतम् ।
अफलप्रेप्सुना कर्म यत्तत्सात्त्विकमुच्यते ॥१८- २३॥

*niyatam sanga-rahitam
araga-dvesatah kritam
aphala-prepsuna karma
yat tat sattvikam ucyate*

That action which is regulated and which is performed without attachment, without love or hatred, and without desire for fruitive results is said to be in the mode of goodness

The Bhagavad-Gita (18.23)

This book is the outcome of the panel discussions held on the special event honoring first 50 PhD students of Prof. Ramjee Prasad. Several of his PhD students are today worldwide telecommunication leaders themselves. Over 60 post-docs, PhDs, colleagues and the scientific staff were present at the event to celebrate the research and development achievements in the field of mobile and wireless communication. The topics of the two panel discussions held were ‘Globalization of Mobile and Wireless Communications’ and ‘Beyond 2020’. Therefore the title of the book is ‘Globalization of Mobile and Wireless Communications: Today and in 2020’.

The book reflects on how rapidly mobile communication has spread and touched almost every person on this planet, may that person be rich or poor, man or woman, or child or adult. The book also attempts to provide a window into the future and speculates how the wireless world might look like at the end of this decade, and presents some of the key enabling technologies that would drive the process to get there. Since naturally the business models drive the investment decisions and the adoption rate of any new technology, we have also included a chapter on that.

This book serves as a good starting point for casual readers, engineers and researchers who would like to have access to a book that provides in one single place what is there to know about the reasons behind the huge success of the wireless communication around the world.

As globalization becomes more and more important, we foresee more readers (including the policy makers and decision makers in the governments) being interested in the topic of this book. The reader would benefit from a wide range of topics that are discussed in this book, some of which are listed below.

1. The book introduces the notion of globalization of wireless communication
2. The book covers the key technologies (past, present, and future) and their enablers to make mobile wireless a global phenomenon
3. The book not just covers technology aspects, it also addresses applications and techno-economic aspects
4. The book covers standards and international fora and their critical role in globalization
5. The book sheds light on the future developments in wireless communication, and accompanying potential business opportunities
6. Potential impact of wireless communication on efficient management of energy resources and global warming

Because each topic can easily expand into a book of its own and it is difficult to have in-depth knowledge in all of these domains, we chose to invite the various thought leaders in their fields to contribute to this book. The book is written in a style to provide a broad overview of the various technologies with a special emphasis on the user as the center of all activities. It has been our objective to provide the material in one single place to enable quick learning of the fundamentals involved in an easy-to-read format.

Finally, we (including the chapter authors) have tried our best to ensure that each and every chapter is as accurate as possible; however, some errors in any manuscript are inevitable. Please let us know of any errors and ideas to improve the book – such comments will be highly appreciated.

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