Reliable Communications for Short-Range Wireless Systems

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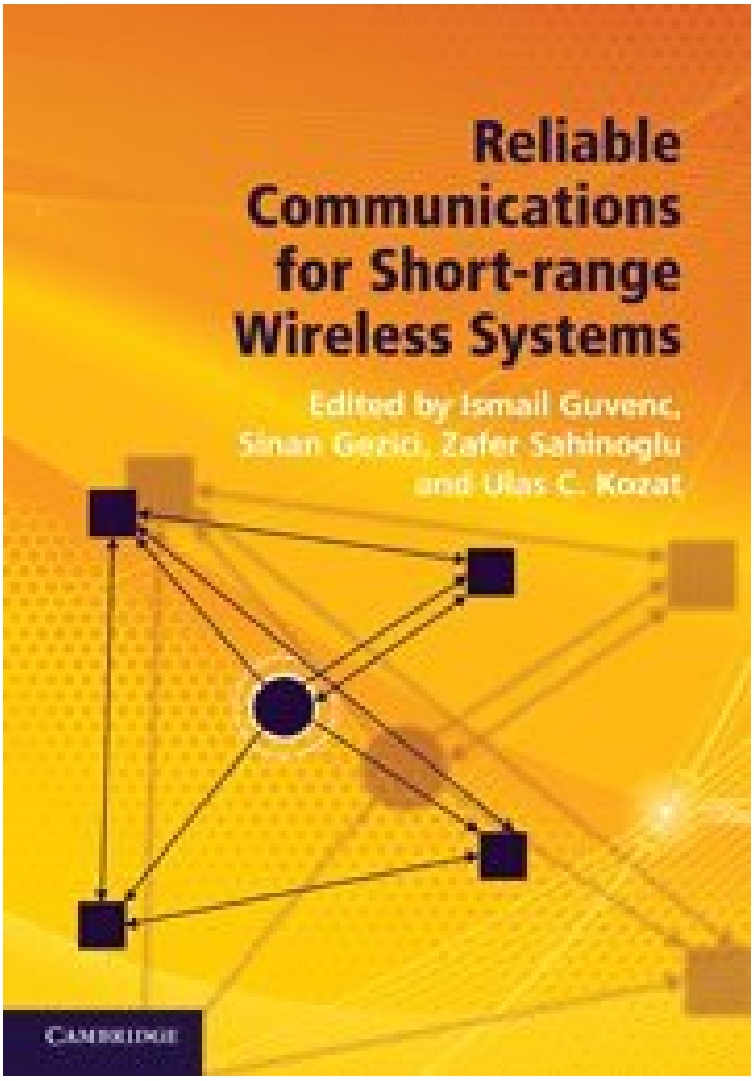

#4494486 in Books Cambridge University Press 2011-04-29Original language:EnglishPDF # 1 9.72 x .91 x 6.85l, 2.60 #File Name: 0521763177426 pages | File size: 46.Mb

From Brand: Cambridge University Press : Reliable Communications for Short-Range Wireless Systems before purchasing it in order to gage whether or not it would be worth my time, and all praised Reliable Communications for Short-Range Wireless Systems:

1 of 2 people found the following review helpful. New achievements in milimeter-wave technologiesBy BuyerRecent efforts in supporting the increasing end-user demands bring the short-range wireless technologies into the attention of researchers. This book successfully handles the relavant concepts regarding the wireless technologies in short-range in a clear and understandable manner. Specifically, the achievements in the state of the art applications while employing available frequencies around 60 GHz band are presented from different perspectives. As the direction of extensive

research activities have been intensified on the milimeter-wave bands these days because of the jam in other frequencies, this book is believed to provide a valuable guide not only to the academia but also to the industry in broadening the relavant studies and developing commercial products.

Ensuring reliable communication is an important concern in short-range wireless communication systems with stringent quality of service requirements. Key characteristics of these systems, including data rate, communication range, channel profiles, network topologies and power efficiency, are very different from those in long-range systems. This comprehensive book classifies short-range wireless technologies as high and low data rate systems. It addresses major factors affecting reliability at different layers of the protocol stack, detailing the best ways to enhance the capacity and performance of short-range wireless systems. Particular emphasis is placed on reliable channel estimation, state-of-the-art interference mitigation techniques and cooperative communications for improved reliability. The book also provides detailed coverage of related international standards including UWB, ZigBee, and 60 GHz communications. With a balanced treatment of theoretical and practical aspects of short-range wireless communications and with a focus on reliability, this is an ideal resource for practitioners and researchers in wireless communications.

About the AuthorIsmail Guvenc is a research engineer with DoCoMo USA Labs, where his research interests include UWB communications and position estimation, femtocell networks, relay networks, LTE systems and cognitive radio. He has published several standardization contributions for IEEE 802.15 and IEEE 802.16 standards, and holds 4 US patents, with another 15 pending US patent applications.Sinan Gezici is an Assistant Professor in the Department of Electrical and Electronics Engineering at Bilkent University, Turkey. His research interests are in the areas of signal detection, estimation and optimization theory, and their applications to wireless communications and localization systems. Among his publications in these areas is the recent book Ultra-Wideband Positioning Systems: Theoretical Limits, Ranging Algorithms, and Protocols.Zafer Sahinoglu is a Senior Principal Member of Technical Staff at Mitsubishi Electric Research Labs, where his current research interests include UWB localization, high efficiency wireless power transfer, low complexity space-time adaptive processing and game theoretic dynamic energy pricing. He has contributed significantly to MPEG-21, ZigBee, IEEE 802.15.4a and IEEE 802.15.4e standards and holds 2 European and 25 US patents, with 26 patents pending.Ulas C. Kozat is the Project Manager for the Network Architecture team at DoCoMo USA Labs. He has conducted research in the broad areas of wireless communications and communications networks, and has published mainly in cross-layer optimization, network modeling and performance analysis, and algorithm/protocol design.