Description: Resource allocation and power optimization is a new challenge in multimedia services in cellular communication systems. To provide a better end-user experience, the fourth generation (4G) standard Long Term Evolution/Long Term Evolution-Advanced (LTE/LTE-Advanced) has been developed for high-bandwidth mobile access to accommodate today's data-heavy applications. LTE/LTE-Advanced has adopted discontinuous reception (DRX) to extend the user equipment's battery lifetime, thereby further supporting various services and large amounts of data transmissions.

By introducing the basics of mathematical analysis and performance evaluation of power-saving mechanisms in 3rd generation partnership project (3GPP) LTE and LTE-Advanced networks, the authors of this book aim to describe novel algorithms which could have better performance capabilities than previous methods.

Chapter 1 gives the basic theory description of the 3GPP LTE network and 3GPP DRX power saving mechanism, empirical measurements of LTE network traffic and an overview of the basic LTE DRX model in the field of power saving techniques. Chapter 2 provides steps for deriving a 2-state analytical model up to a 4-state DRX model. The third and final chapter summarizes alternative methods for the implementation of LTE DRX.

Contents

1. Basic Theory.
3. Other Approaches for LTE Power Saving.

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