Software Defined Mobile Networks (SDMN). Beyond LTE Network Architecture. Wiley Series on Communications Networking & Distributed Systems

Description: Software-Defined Networking (SDN) is one of the promising technologies that provide the required improvements in flexibility, scalability, and performance to future mobile networks to keep up with the expected growth. Thus, Software Defined Mobile Networks (SDMN) will play a crucial role in the beyond LTE mobile networks. This book presents the concepts of SDMNs which would change the network architecture of the current LTE (3GPP) networks. It provides an insight into the feasibility and opportunities of SDMN concept, as well as evaluates the limits of performance and scalability of the new technologies applied on mobile broadband networks.

This book has been created by the joint effort of many academic researchers and industrial engineers. It provides a simultaneous account of the theoretical principles of beyond LTE mobile network architectures and feasible implementations aspects.

The book is written in a step-by-step approach that includes both introductory level text as well as more advanced reference. It will meet the expectation of readers from various backgrounds and levels.

The book is written in an accessible and simple style yet will transfer up-to-date telecommunication knowledge to academic researchers and cutting-edge knowledge in SDMN concepts for industrial engineers to cope with the innovation competition.

Covered Topics Include:

- Fundamentals: includes a comprehensive literature review in SDN concepts and the evolution of mobile networks
- Architecture and Network Implementation: provides an initial explanation about the principles of SDMNs and explains the various implementation options
- Traffic Transport and Network Management: discusses the impact of SDN concepts on traffic transport and network management functions of future mobile networks
- Resource and Mobility Management: explains the various challenges on resource and mobility management of future mobile networks while adapting the SDN concepts
- Security Aspects: includes state-of-the-art in security challenges in future mobile architectures and security management aspects in SDMNs
- Techno-Economic Aspects: discusses the business cases in virtualized mobile network environments and presents both evolutionary and revolutionary industry architectures for SDMNs.

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