LTE Self-Organising Networks (SON). Network Management Automation for Operational Efficiency

Description: Covering the key functional areas of LTE Self-Organising Networks (SON), this book introduces the topic at an advanced level before examining the state-of-the-art concepts. The required background on LTE network scenarios, technologies and general SON concepts is first given to allow readers with basic knowledge of mobile networks to understand the detailed discussion of key SON functional areas (self-configuration, -optimisation, -healing). Later, the book provides details and references for advanced readers familiar with LTE and SON, including the latest status of 3GPP standardisation.

Based on the defined next generation mobile networks (NGMN) and 3GPP SON use cases, the book elaborates to give the full picture of a SON-enabled system including its enabling technologies, architecture and operation. "Heterogeneous networks" including different cell hierarchy levels and multiple radio access technologies as a new driver for SON are also discussed.

- Introduces the functional areas of LTE SON (self-optimisation, -configuration and -healing) and its standardisation, also giving NGMN and 3GPP use cases
- Explains the drivers, requirements, challenges, enabling technologies and architectures for a SON-enabled system
- Covers multi-technology (2G/3G) aspects as well as core network and end-to-end operational aspects
- Written by experts who have been contributing to the development and standardisation of the LTE self-organising networks concept since its inception
- Examines the impact of new network architectures ("Heterogeneous Networks") to network operation, for example multiple cell layers and radio access technologies

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