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Blockchains in 6G

A Standardized Approach To Permissioned Distributed Ledgers

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Based on work done within ETSI, this comprehensive guide dives deep into the heart of blockchains and their imminent intersection with 6G. Whether you're a tech enthusiast or an industry expert, this book promises to enlighten, engage, and inspire, drawing you into the exciting intersection of 6G and blockchains.

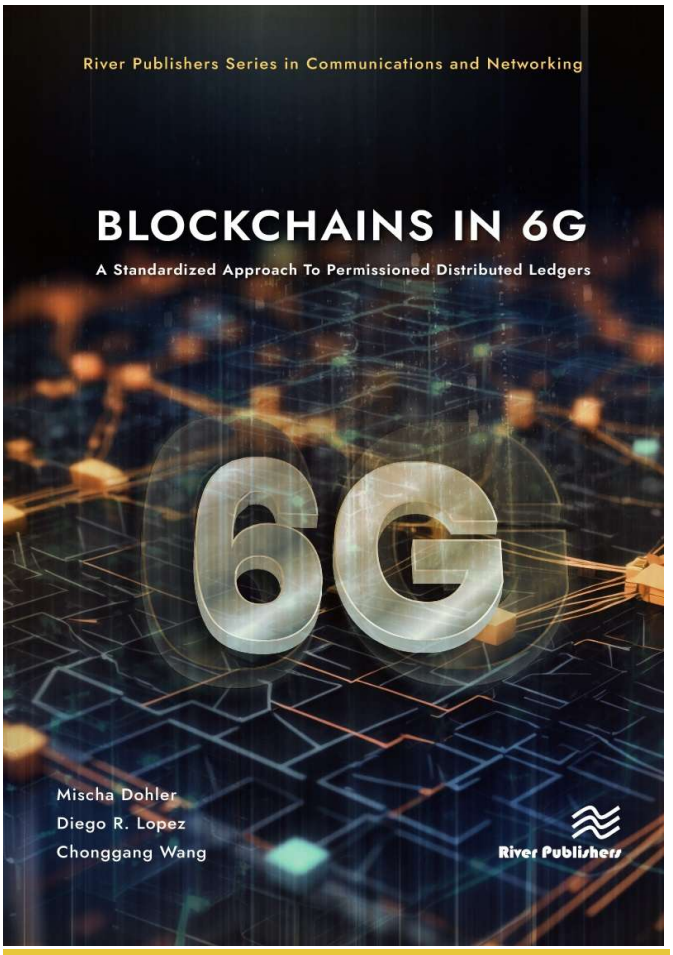
Part I - Blockchain Enablers: Embark on a foundational journey through blockchains, unraveling their basic principles and complex mechanics. From understanding the rudiments of blockchains to exploring the nuances of smart contracts, this section elucidates the pivotal aspects that make blockchains tick. Learn about the necessity for scalability, interoperability, and the crucial role of permissioned distributed ledgers.

Part II - Blockchain Ecosystem: Delve into the underpinnings that form the blockchain ecosystem. This segment demystifies the governance and technical standards that guide blockchains and touches upon the alliances formed in its name. As an essential addition, it delves into the regulatory landscape and the critical R&D projects pushing blockchain boundaries.

Part III - Blockchain Standards: Setting a benchmark for quality and reliability, this part deciphers the ETSI standards work governing blockchains. Understand the governance of permissioned distributed ledger (PDL) applications, explore reference architectures, and comprehend the role of smart contracts. Data management in a distributed setup and the intricacies of offline operations are neatly detailed, followed by a deep dive into the challenges and solutions for ledger interoperability.

Part IV - Blockchains in 6G: The last part of the book bridges the vast world of blockchains with the frontier of 6G telecommunication systems. Commencing with an introduction to the predecessors of 6G, it then charts the course for blockchains' role in 6G data sharing and the radio access network, as well as the emerging topic of the metaverse.

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