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Nota di contenuto	Cover -- Title Page -- Copyright -- Contents -- ABOUT THE AUTHOR -- Preface -- Acknowledgments -- Acronyms -- Chapter 1 Introduction -- 1.1 Toward 6G: A New Era of Convergence -- 1.2 Fusion of Digital and Real Worlds: Multiverse vs. Metaverse -- 1.3 The Big Picture: Narratives for 2030 and Beyond -- 1.4 Purpose and Outline of Book -- References -- Chapter 2 Metaverse: The New North Star -- 2.1 Origins -- 2.2 Early Deployments -- 2.3 Key Enabling Technologies -- 2.4 Definition(s) of the Metaverse -- 2.5 Metaverse Economy and Community: Gamified Experiences -- References -- Chapter 3 The Multiverse: Infinite Possibility -- 3.1 Experience Innovation on the Digital Frontier -- 3.2 The Multiverse -- 3.3 Beyond the Metaverse Origins: Into the Future -- References -- Chapter 4 6G Vision and Next G Alliance Roadmap -- 4.1 6G Vision: Recent Progress and State of the Art -- 4.2 NSF: Next G Research -- 4.3 Next G Alliance Roadmap -- References -- Chapter 5 6G PostSmartphone Era: XR and Hybrid Augmented Intelligence -- 5.1 XR in the 6G PostSmartphone Era -- 5.2 HybridAugmented Intelligence -- References -- Chapter 6 Web3 and Token Engineering -- 6.1 Emerging Web3 Token Economy -- 6.2 Backend Revolution -- 6.3 TechnologyEnabled Social Organisms -- 6.4 Tokens -- 6.5 Mechanism Design and Token Engineering -- References -- Chapter 7 From Robonomics to Tokenomics -- 7.1 Robonomics -- 7.2 Blockchain Oracles and OnChaining -- 7.3 BlockchainEnabled Trust Game -- 7.4 OnChaining Oracle for Networked NPlayer Trust Game -- 7.5 Playing the NPlayer Trust Game with Persuasive Robots --

7.6 Tokenomics -- References -- Chapter 8 Society 5.0: Internet As If People Mattered -- 8.1 Human Nature: Bounded Rationality and Predictable Irrationality -- 8.2 Society 5.0: HumanCenteredness -- 8.3 The Path (DAO) to a HumanCentered Society. 8.4 From Biological Superorganism to Stigmergic Society -- 8.5 Biologization: Exiting the Anthropocene and Entering the Symbiocene -- References -- Chapter 9 Metahuman: Unleashing the Infinite Potential of Humans -- 9.1 Becoming Human: The Biological Uniqueness of Humans -- 9.2 Implications of Biological Human Uniqueness for Metaverse -- 9.3 MetaHuman Creator: Building a More Realistic Virtual World -- 9.4 The Case Against Reality: Why Evolution Hid the Truth from Our Eyes -- 9.5 Simulated Reality: The Simulation Hypothesis -- 9.6 Metareality and Metahuman -- References -- Chapter 10 Opportunities vs. Risks -- 10.1 The "New New Normal" and Upcoming T Junction -- 10.2 Opportunities -- 10.3 Risks -- 10.4 Team Human: From Communications to Communitas -- References -- Chapter 11 Conclusion and Outlook -- 11.1 Today's Life in "Parallel Universes" -- 11.2 The Road Ahead to the Future Multiverse: 6G, Next G, and the Metaverse -- 11.3 Age of Discovery: Navigating the Risks and Rewards of Our New Renaissance -- References -- Epilogue -- Index -- THE COMSOC GUIDES TO COMMUNICATIONS TECHNOLOGIES -- EULA.

Sommario/riassunto

This book weaves emerging themes in future 6G and Next G networks carefully together. It points to three spheres of contexts with different narratives for the year 2030 and beyond, in which the coming Metaverse as the precursor of the future Multiverse can be embedded naturally. The book aims at providing the reader with new cross-disciplinary research material, ranging from communication and computer science to cognitive science, social sciences, and behavioral economics, for building a deeper Metaverse. It will be instrumental in helping the reader find and overcome some of the most common 6G and Next G blind spots. Modern networks are more than communication and computer science. They may be better viewed as techno-social systems that exhibit complex adaptive system behavior and resemble biological superorganisms. 6G and especially Next G should go beyond continuing the linear incremental 6G=5G+1G mindset of past generations of mobile networks. To this end, the book: Helps readers inquire into new areas of knowledge or understanding that they didn't have or didn't pay attention to find their 6G/Next G blind spots Highlights the unique potential benefits of the virtual world for society in that it provides a useful extension of the real-world economy by compensating for its well-known market failures, e.g., rising income inequality Provides a comprehensive description of the original Metaverse vision and highlights the different Metaverse components, applications, open research challenges, and early Metaverse deployment examples from both industry and academia Describes how the Multiverse goes beyond the Metaverse origins and explores the importance of experience innovation since experiences play a central role in the Metaverse Explains Web3 and the emerging field of token engineering and tokenization, i.e., the process of creating tokenized digital twins via programmable tokens, which are viewed as the killer application of Web3 networks for creating technology-enabled social organisms and restoring tech-driven common goods Reviews anticipated 6G paradigm shifts and elaborates on the difference between 6G and Next G research, including Next G Alliance's audacious goals and their symbiotic relationship between technology and a population's societal and economic needs Doubles down on the mutually beneficial symbiosis between digitalization and biologization

for our possible evolution into future metahumans with infinite capabilities by making us smarter and creating a fundamentally new form of sociality in the Metaverse and Multiverse as well as the future stigmergy enhanced Society 5.0 by leveraging on time-tested self-organization mechanisms borrowed from nature Presents a variety of different concepts of the true nature of reality that bring us closer to the original Metaverse vision and explains how 6G, Next G, and the Metaverse may eventually pave the way to the peak-experience machine that democratizes access to the upper range of human experiences Touches on the possible transition from communication to services beyond communication, most notably the cross-cultural phenomenon of *communitas* in anthropology and its increasing degrees of perceived connectedness with others, the world, and oneself, given the importance of creating a deep sense of community in the Metaverse Written for students, network researchers, professionals, engineers, and practitioners, 6G and Onward to Next G: The Road to the Multiverse explores the latest Internet developments, with a particular focus on 6G and Next G networks in the context of the emerging Metaverse and future Multiverse as the successors of today's mobile Internet that has defined the last two decades.
