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Nota di contenuto	5G Spectrum and Standard; Contents; Acknowledgments; 1Introduction; 1.1 Fifth Generation (5G) Technology Economics; 1.2 Technical and Commercial Innovation by Wavelength; 1.3 RF Performance at Shorter Wavelengths; 1.4 Market and Regionally Specific Requirements; 1.5 Military Millimeter Radio for Wide-Area 5G; 1.6 Coexistence Costs; 1.7 5G Definitions and Spectral Implications ; 1.8 5G and Military and Space Communications Research ; 1.9 The Real Purpose of 5G: A Reduction in Delivery Cost?; 1.10 Understanding Radio: Think Wavelength, Not Frequency; 1.11 5G Wavelengths of Interest. 1.12 The Cost of Coexistence and Complexity1.13 Profitable Spectrum: The Meter Band; 1.14 Five Processing Domains and Their Relevance to 5G Systems; 1.14.1 The Frequency Domain; 1.14.2 The Phase and Amplitude Domain; 1.14.3 The Power Domain; 1.14.4 The Time Domain; 1.14.5 The Spatial Domain; 1.15 Cost and Performance Economics; References ; 2The Technology.
Sommario/riassunto	This new resource provides key insight into future 5G radio systems and the technical and economic impact on industries, communities and end-users. The book offers a comprehensive understanding of the options available for teams tasked with bringing 5G products and

services to market or developing supporting standards and regulatory frameworks. Readers find contemporary examples of millimeter band radio hardware including 60 GHz and V band and E Band point to point radio. This book demonstrates the profound progress with 4G radio signal processing and RF hardware to reveal its potential applicability to 5G radio systems. It shows how 5G systems are capable of delivering data rates that are ten to one hundred times faster than 4G systems. Developments in spatial processing and beam forming in local area radio networks are presented and the challenge of scaling these systems to wide area radio is explored. This book reviews military and space radio and automotive radar innovation with direct relevance to 5G radio design.