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Titolo	Wireless positioning technologies and applications // Alan Bensky
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ISBN	1-59693-131-0
Descrizione fisica	1 online resource (310 p.)
Collana	GNSS technology and applications series
Disciplina	621.384
Soggetti	Wireless communication systems Adaptive antennas
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Basic principles and applications -- Spread spectrum -- Time transfer -- Multicarrier phase measurement -- Received signal strength -- Time of arrival and time difference of arrival -- Angle of arrival -- Cellular networks -- Short-range wireless networks and RFID -- Ultrawideband (UWB).
Sommario/riassunto	At last--here's a comprehensive book that puts full details on all short-range wireless-positioning methods at your command for instant access and use. This one-stop resource surveys each technique's theory of operation, advantages and disadvantages, applicability in different domains, implementation procedures, and accuracy to help you select the right technology for any application and ensure the best results possible. Real-life examples together with 161 diagrams help bring all options into sharp focus. After introducing wireless positioning fundamentals along with various personal, commercial, and industrial applications, the book guides you step by step through radio signal time of flight methods, the signal strength method, the angle of arrival system, and the geometric use of distance measurement to determine location. It discusses location awareness applications and implementations using cellular networks. You are brought up to speed on fast-developing techniques involving local area networks (WLANs), personal area networks (WPANs), and radio frequency ID (RFID). Moreover, you find coverage of the distance measurement features in

the new IEEE 802.15.4a spec for low rate wireless personal area networks. This practical resource offers detailed guidance on how to implement important technologies, including direct sequence spread spectrum, frequency hopping spread spectrum, and ultrawideband (UWB). The book also explores ways to counteract accuracy impairments caused by noise, multipath and fading, and limitations of antenna directivity and time measurement precision.

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