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Nota di contenuto	Mobile Database Systems; Contents; Acknowledgments; Preface; 1 Mobile Database System; 1.1 Introduction; 1.1.1 Fully Connected Information Space; 1.2 Types of Mobility; 1.3 Summary; References; 2 Wireless Network Communication; 2.1 Introduction; 2.1.1 Radio Frequency - Spectrum and Band; 2.1.2 Cellular Communication; 2.2 Continuous Connectivity; 2.2.1 Structure of a Channel; 2.2.2 Absence of Free Channel; 2.2.3 Signal Fading; 2.2.4 Frequency Reuse; 2.2.5 PCS and GSM; 2.2.6 PCS - Personal Communication Service; 2.2.7 Interface; 2.2.8 Call Processing 2.2.9 GSM - Global System for Mobile Communication 2.3 Summary; References; 3 Location and Handoff Management; 3.1 Introduction; 3.1.1 Location Management; 3.1.2 Handoff Management; 3.1.3 Roaming; 3.2 Summary; References; 4 Fundamentals of Database Technology; 4.1 Conventional Database Architecture; 4.1.1 Database Partition and Distribution; 4.2 Database Processing; 4.2.1 Transaction Structure; 4.3 Serialization of Transactions; 4.3.1 Serializability-Based Correctness Criteria; 4.3.2 Serializability Theory; 4.3.3 Degree of

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4.4.1 Nested Transaction Model; 4.4.2 SAGA; 4.4.3 Cooperative Transaction; 4.4.4 ConTract; 4.4.5 Flex Transaction; 4.5 Summary; References; 5 Introduction to Concurrency Control Mechanisms; 5.1 Introduction; 5.1.1 Ways of Locking Data Items; 5.1.2 The Phantom Problem; 5.1.3 Multigranularity Locking; 5.1.4 Heuristic Approach in Locking Schemes; 5.1.5 Non-Locking-Based Schemes; 5.1.6 Mixed Approaches; 5.1.7 Multiversion Approach; 5.1.8 Optimistic Concurrency Control Mechanisms; 5.1.9 Two-Phase Locking for Distributed Database Systems; 5.2 Summary; References; 6 Data Processing and Mobility  
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7.9.1 Correctness Criterion

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## Sommario/riassunto

A breakthrough sourcebook to the challenges and solutions for mobile database systems. This text enables readers to effectively manage mobile database systems (MDS) and data dissemination via wireless channels. The author explores the mobile communication platform and analyzes its use in the development of a distributed database management system. Workable solutions for key challenges in wireless information management are presented throughout the text. Following an introductory chapter that includes important milestones in the history and development of mobile data processing, th

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