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Altri autori (Persone)	ChaouchiHakima
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Nota di contenuto	Cover; The Internet of Things; Title Page; Copyright Page; Table of Contents; Preface; Chapter 1. Introduction to the Internet of Things; 1.1. Introduction; 1.2. History of IoT; 1.3. About objects/things in the IoT; 1.4. The identifier in the IoT; 1.5. Enabling technologies of IoT; 1.5.1. Identification technology; 1.5.2. Sensing and actuating technology; 1.5.3. Other technologies; 1.5.4. Connected objects' communication; 1.6. About the Internet in IoT; 1.7. Bibliography; Chapter 2. Radio Frequency Identification Technology Overview; 2.1. Introduction; 2.2. Principle of RFID 2.3. Components of an RFID system2.3.1. Reader; 2.3.2. RFID tag; 2.3.3. RFID middleware; 2.4. Issues; 2.5. Bibliography; Chapter 3. Wireless Sensor Networks: Technology Overview; 3.1. History and

context; 3.1.1. From smart dust to smart plants; 3.1.2. Application requirements in modern WSNs; 3.2. The node; 3.2.1. Communication; 3.2.2. Computation; 3.2.3. Sensing; 3.2.4. Energy; 3.3. Connecting nodes; 3.3.1. Radio basics; 3.3.2. Common misconceptions; 3.3.3. Reliable communication in practice: channel hopping; 3.4. Networking nodes; 3.4.1. Medium access control; 3.4.2. Multi-hop routing; 3.5. Securing communication; 3.6. Standards and Fora; 3.7. Conclusion; 3.8. Bibliography; Chapter 4. Power Line Communication Technology Overview; 4.1. Introduction; 4.2. Overview of existing PLC technologies and standards; 4.2.1. History of PLC technologies; 4.2.2. Different types of in-home PLC technologies; 4.2.3. Security; 4.2.4. Performances of PLC technologies; 4.2.5. Standards and normalization; 4.3. Architectures for home network applications; 4.3.1. Architecture for a high bit-rate home network application; 4.3.2. Architecture for low bit-rate home network application; 4.4. Internet of things using PLC technology; 4.4.1. Connecting objects in the indoor environment; 4.4.2. Interoperability of connecting objects in the home environment; 4.5. Conclusion; 4.6. Bibliography; Chapter 5. RFID Applications and Related Research Issues; 5.1. Introduction; 5.2. Concepts and terminology; 5.2.1. Radio-frequency identification; 5.2.2. Transponder (tag) classes; 5.2.3. Standards; 5.2.4. RFID system architecture; 5.2.5. Other related technologies; 5.3. RFID applications; 5.3.1. Logistics and supply chain; 5.3.2. Production, monitoring and maintenance; 5.3.3. Product safety, quality and information; 5.3.4. Access control and tracking and tracing of individuals; 5.3.5. Loyalty, membership and payment; 5.3.6. Household; 5.3.7. Other applications; 5.4. Ongoing research projects; 5.4.1. Hardware issues; 5.4.2. Protocols; 5.5. Summary and conclusions; 5.6. Bibliography; Chapter 6. RFID Deployment for Location and Mobility Management on the Internet; 6.1. Introduction; 6.2. Background and related work; 6.2.1. Localization; 6.2.2. Mobility management; 6.3. Localization and handover management relying on RFID; 6.3.1. A technology overview of RFID; 6.3.2. How RFID can help localization and mobility management

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## Sommario/riassunto

Internet of Things: Connecting Objects... puts forward the technologies and the networking architectures which make it possible to support the Internet of Things. Amongst these technologies, RFID, sensor and PLC technologies are described and a clear view on how they enable the Internet of Things is given. This book also provides a good overview of the main issues facing the Internet of Things such as the issues of privacy and security, application and usage, and standardization.

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