Record Nr. UNINA9910437588803321 Autore Qiao Yan Titolo RFID as an infrastructure / / Yan Qiao, Shigang Chen, Tao Li Pubbl/distr/stampa New York, : Springer, 2013 **ISBN** 1-283-62476-1 9786613937216 1-4614-5230-9 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (89 p.) SpringerBriefs in computer science, , 2191-5768 Collana Altri autori (Persone) ChenShigang LiTao 621.3 Disciplina Soggetti Radio frequency identification systems Wireless sensor networks 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. Nota di contenuto Introduction -- Tag Estimation in RFID Systems -- Collecting Information from Sensor-augmented RFID Systems -- Tag-ordering Polling Protocols in RFID Systems. Sommario/riassunto RFID (radio frequency identification) tags are becoming ubiquitously available in object tracking, access control, and toll payment. The current application model treats tags simply as ID carriers and deals with each tag individually for the purpose of identifying the object that the tag is attached to. The uniqueness of RFID as an Infrastructure is to change the traditional individual view to a collective view that treats universally-deployed tags as a new infrastructure, a new wireless platform on which novel applications can be developed. The book begins with an introduction to the problems of tag estimation and information collection from RFID systems, and explains the challenges. It discusses how to efficiently estimate the number of tags in a large RFID system, considering both energy cost and execution time. It then gives a detailed account on how to collect information from a sensor-

augmented RFID network with new designs that significantly reduce

execution time.