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Autore	Bell Charles
Titolo	Beginning Sensor Networks with XBee, Raspberry Pi, and Arduino : Sensing the World with Python and MicroPython // by Charles Bell
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Edizione	[2nd ed. 2020.]
Descrizione fisica	1 online resource (732 pages)
Collana	Technology in action series
Disciplina	681.2
Soggetti	Makerspaces Computer networks Computers Maker Computer Communication Networks Computer Hardware
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1: Introduction to Sensor Networks -- Chapter 2: Tiny Talking Modules: An Introduction to XBee -- Chapter 3: Programming in MicroPython -- Chapter 4: XBee-based Sensor Nodes -- Chapter 5: Raspberry Pi-based Sensor Nodes -- Chapter 6: Arduino-based Sensor Nodes -- Chapter 7: Methods for Storing Sensor Data -- Chapter 8: Turning Your Raspberry Pi into a Database Server -- Chapter 9: MySQL and Arduino: United at Last! -- Chapter 10: Building Your Network: Arduino Wireless Aggregator + Wireless Sensor Node + Raspberry Pi Server -- Chapter 11: Putting It All Together -- Appendix.
Sommario/riassunto	Build sensor networks with Python and MicroPython using XBee radio modules, Raspberry Pi, and Arduino boards. This revised and updated edition will put all of these together to form a sensor network, and show you how to turn your Raspberry Pi into a MySQL database server to store your sensor data! You'll review the different types of sensors and sensor networks, along with new technology, including how to build a simple XBee network. You'll then walk through building an

sensor nodes on the XBee, Raspberry Pi, and Arduino, and also learn how to collect data from multiple sensor nodes. The book also explores different ways to store sensor data, including writing to an SD card, sending data to the cloud, and setting up a Raspberry Pi MySQL server to host your data. You'll even learn how to connect to and interact with a MySQL database server directly from an Arduino! Finally you'll see how to put it all together by connecting your sensor nodes to your new Raspberry Pi database server. If you want to see how well XBee, Raspberry Pi, and Arduino can get along, especially to create a sensor network, then *Beginning Sensor Networks with XBee, Raspberry Pi, and Arduino* is just the book you need. You will: Code your sensor nodes with Python and MicroPython Work with new XBee 3 modules Host your data on Raspberry Pi Get started with MySQL Create sophisticated sensor networks.
