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Autore	Horan Brendan
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Out the Fat""; ""Optimizing the SD Card""; ""Thinking About Swapping""; ""Optimizing CPU Cycles""; ""I/O Tuning""; ""Understanding the CFQ Scheduler""; ""Understanding the Noop Scheduler""; ""Changing the Scheduler""; ""Lighter Applications and Tools""; ""Summary""; ""CHAPTER 3 A Simple Temperature Sensor""; ""Breadboards and GPIO Pins""; ""Sensors""; ""Introducing the DHT11""; ""Introducing the DS18B20""; ""The Amazing 1-Wire Bus""; ""Building the Sensors""
""Building the Sensors""""""Using the Little Black DS1820B""; ""Reading the DS1820B on Linux""; ""Using the Big Blue DHT11""; ""Reading the DHT11 in Linux""; ""Scripting the Sensors""; ""Summary""; ""CHAPTER 4 Driving a Simple Character LCD""; ""Pulling Apart the HD44780 and the Clones""; ""Preparing the Hardware""; ""LCD Prep Work""; ""Shift Registers""; ""The I2C Bus""; ""Physical Layout""; ""Raspberry Pi Tolerance and High-Level Voltage Input""; ""Pull-Up Resisters and Open Drains""; ""Addressing I2C Devices""; ""The Bus Itself""; ""Putting It All Together""; ""Finding Your I2C Device""
""Software and LCD Clients""""""Server Configuration""; ""Testing the Server""; ""Running a Client""; ""Displaying Text""; ""Summary""; ""CHAPTER 5 Security Monitoring Device""; ""Introduction to the PIR""; ""Introducing the Pressure Mat""; ""Assembling the Devices""; ""The Pressure Mat""; ""Using the GPIO Pins""; ""A Script for Your Mat Status""; ""Connecting the PIR""; ""Bring Forth the WEBrick""; ""Welcome WEBrick""; ""The Security Application Code""; ""Running the Security Application""; ""Summary""; ""CHAPTER 6 Cross Compile Environment""; ""Introducing Cross Compiling""; ""The Host""
""Crosstool-NG""

Sommario/riassunto

Practical Raspberry Pi takes you quickly through the hardware and software basics of the Raspberry Pi. Author Brendan Horan then gets you started on a series of fun and practical projects, including a simple temperature sensor, a media center, a real-time clock, and even a security monitoring device, all of which require minimal programming experience. Along with these projects, you'll learn all about the Raspberry Pi hardware, including how it can be so powerful and still so small and inexpensive, why it's so suitable as a video player, and how you can customize it for different tasks, including running different operating systems on it, including Android and RISC OS. The Raspberry Pi is an inexpensive but relatively powerful little computer. It was designed to get kids interested in computing and programming, but it's also a great platform for hardware hackery. The projects in this book will get you deep into the hardware to show you what the Raspberry Pi can really do.