# LINUX DEVICE DRIVERS

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Are you frustrated by not having the drivers for a particular piece of hardware? Then write your own! The aim of this book is to teach you how to write device drivers for Linux. It is aimed at people who want to experiment with the computer and at technical programmers who need to deal with the inner workings of a Linux box. It covers kernel hacking rather than quick fix user-space applications and so is not for the faint hearted. The main target of the book is writing for version 2.4 of the Linux kernel, but each chapter includes a section on backward compatibility. The book covers modularization; char devices; debugging techniques and advanced features of char devices such as blocking operations and time and memory management in the kernel. Chapter eight covers hardware with management of I/O

ports and memory buffers. These chapters require the building of a simple testing device. Chapter 10 continues the writing of kernel software and covers portability.

The later sections of the book go deeper into modularization, block devices and even more advanced aspects of memory management. Network interfaces are dealt with in chapter 14. The book ends with a guide to the overall design of the kernel source.

There is a good section on further information so that if your appetite has been whetted by this book you can continue to develop your projects. ∎

Author:	**A Rubini & J Corbet**
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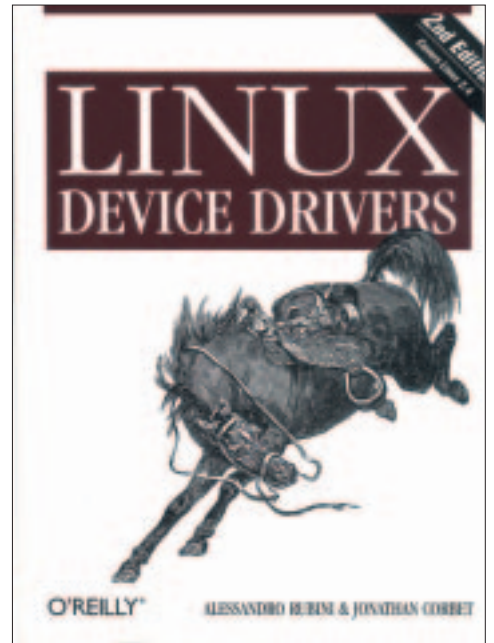
CRYPTOGRAPHY IN C AND C++
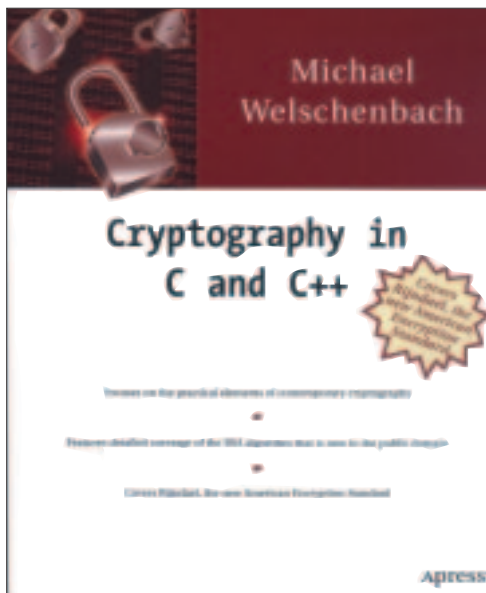
If you are interested in writing cryptography algorithms or just want to know how they work then this is the book for you. Complete with a CD-ROM containing Linux tested code, the book pulls no punches with mathematical formulae, starting with low level programming of fundamental maths operation, the book expands to advanced mathematical theories. With C examples at each step explaining multiprecision arithmetic, the author concludes the opening section with C Lint testing routines.

The second half of the book deals with C++ and error handling. Full explanations of the RSA algorithm are used as a working example. The book concludes with the Rijndael, the new American data encryption standard. Comprehensive appendices

separate out directories of functions for C and C++. Due to the heavy mathematical nature of the text, this is not a book for light reading or dipping into, but the step-by-step path provides a rewarding challenge for the committed enthusiast.

The ready-made assembly routines included on the CD, prove to be not just informative but actually useful, and now reside on my hard drive. If you were fascinated by "Fermat's last theorem" and enthralled by tales of Enigma coding then this is the next logical step. Overall a worthwhile book for this important topic. ∎

Author:	**M Welschenbach**
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