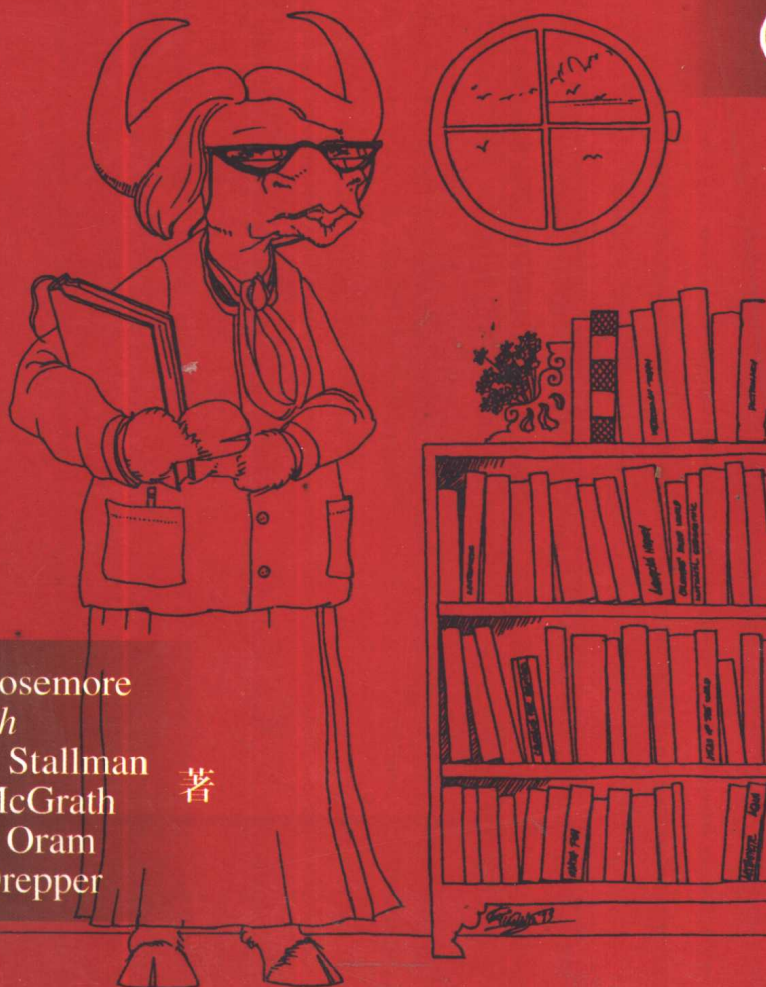


# The GNU C Library Reference Manual Volume One

## GNU C 库技术手册 卷1

(英文版)



Sandra Loosemore  
with  
(美) Richard M. Stallman  
Roland McGrath  
Andrew Oram  
Ulrich Drepper

著



机械工业出版社  
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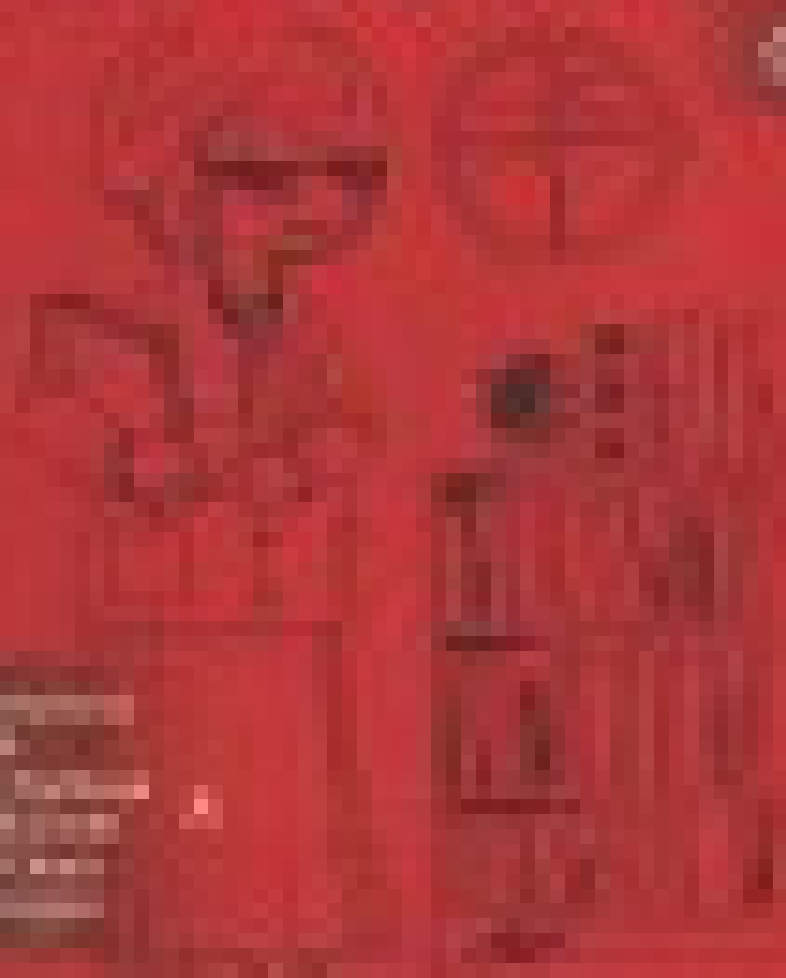
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GNU C 技术手册

# The GNU C Library Reference Manual Volume One

GNU C 技术手册 卷一

第 1 版



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GNU技术文档精粹

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# 序 言

GNU工程（GNU Project）是由 Richard M. Stallman（理查德·斯托曼）博士于1985年为了保护 and 培养自由软件的开发而创建的，其目标是开发一个完整的操作系统，以及一个符合GPL的完整工具集。在技术实践中，它瞄准了当时先进的UNIX操作系统。UNIX操作系统采用了模块化的设计思想，整个操作系统由内核和多种工具组成，并且通过这些工具与内核的协同工作来完成计算和信息处理任务。GNU工程发轫后，黑客们便一个接一个地开发类似UNIX操作系统上的这些工具和模块，以达到最终替代UNIX系统的目的。到1991年时，GNU工程除了缺乏一个可以使用的内核之外，已接近大功告成。

1991年，芬兰大学生Linus Torvalds在MINIX系统的基础上创作了一个可以在Intel 80386平台上运行的仿UNIX的内核，称为“Linux”。受自由软件基金会的影响，Linux也按照GPL软件许可证发布，而且自由软件社团的黑客们通过艰苦的努力和合作，将各种已经完成的GNU工具与Linux内核合并，形成了一个完整可用的自由操作系统，称为“GNU/Linux”。

现在，GNU/Linux系统在市场上取得了巨大的成功，据不完全统计，GNU/Linux目前的用户数量已经突破二千万之众，装机类型涵盖服务器、工作站、台式机、笔记本电脑和多种嵌入式系统，自由软件的哲学思想已经在基础性的软件平台领域取得了巨大的成功。

从技术的角度看，GNU工程的一大突出贡献是它提供了大量的优秀工具，这些工具本身也是按照GPL或者LGPL许可证发布的，例如编辑器GNU Emacs、编译器GCC、调试器GDB、GNU C Library、外壳BASH、GNU Make等等，这些工具质量优秀、支持的平台广泛，成为已经众多开发人员喜爱的开发利器。

自由软件基金会在开发这些优秀的GNU工具的同时，还特地组织人员为这些GNU工具和软件编写了优秀的软件文档，这些文档也按照“Copyleft”形式的许可证发布。通过阅读和研究这些软件文档，可以帮助用户学会使用这些软件工具，充分发挥这些软件工具的强大潜力，乃至清楚地掌握原创设计人员的设计思想，这对于自由软件社团开发更多的自由软件，推动自由软件运动的向前发展是具有极大的推动作用。

鉴于国内自由软件运行刚刚兴起，广大自由软件爱好者和开发人员迫切需要了解和掌握这些GNU工具，机械工业出版社华章公司在美国自由软件基金会、自由软件基金会中国研究院的大力支持配合下，及时地组织专家系统地翻译并出版了这套GNU工具的文档，我相信这套丛书对于自由软件运动在中国的快速健康发展必将贡献至钜。

洪 峰

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## Note to the User

This manual is an early version of the documentation for version 2.2 of the GNU C library. It contains many corrections and improvements which are not in the 2.1.x documentation currently available online. Please note that one of the functions documented - **wcsftime** - is one which will appear in the upcoming 2.2 release; please ignore references to it if you are using an earlier version of the library.

The manual is printed in two volumes, with the full table of contents and index in each volume. The first volume ends on page 548, at the end of Chapter 20.

*FSF office staff*

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