USING C-KERMIT

SECOND EDITION

Communication Software

Expanded
and
Updated
for
Version 6.0

FRANK da CRUZ • CHRISTINE M. GIANONE

Using *C-Kermit*

Communication Software

Second Edition

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and
Christine M. Gianone

Digital Press
Boston • Oxford • Johannesburg • Melbourne • New Delhi • Singapore

For information on obtaining a hardcopy of this book, and on all Digital Press publications available, contact our World Wide Web home page at: http://www.bh.com/digitalpress

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Library of Congress Cataloging-in-Publication Data
Da Cruz, Frank, 1944-
Using C-Kermit / Frank da Cruz, Christine M. Gianone. – 2nd ed.
p. cm.
Includes bibliographic references and index.
ISBN 1-55558-164-1
1. C-Kermit. 2. Communication software. I. Gianone, Christine M. II. Title
TK5105.9.D33 1997
005.7’13—dc20 96-38354
CIP

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library.

The publisher offers special discounts on bulk orders of this book.
For information, please contact:
Manager of Special Sales
Butterworth-Heinemann
225 Wildwood Avenue
Woburn, MA 01801-2041
Tel: 781-904-2500
Fax: 781-904-2620

10 9 8 7 6 5 4 3 2 1

Printed in the United States of America

Contents

Illustrations

Tables

Preface

“Who Is Kermit and Why Is He in My Computer?” asked a (now not so) recent headline [60].[1] Kermit is not a “he” at all, but rather an inanimate, genderless, yet friendly computer software package that lets just about any two computers in the world communicate effectively with each other, no matter how they may differ in size, age, appearance, location, power, architecture, manufacture, or nationality.

This book describes *C-Kermit*, quite possibly the world’s most portable communications software program, for UNIX computer systems (hundreds of different ones); Digital Equipment Corporation (Open)VMS on both VAX and Alpha; PCs with Windows 95, Windows NT, or OS/2; Data General AOS/VS, Stratus VOS, the Commodore Amiga, the Atari ST, and computers with the QNX and OS-9 realtime operating systems. The UNIX version of C-Kermit runs on all known implementations of UNIX (see page 16) and on computers ranging from PCs to large mainframes and supercomputers.

C-Kermit software offers you terminal connection, error-free file transfer and management, script programming, and comprehensive support for national and international character sets, over a wide variety of communication methods including direct and dialed serial connections and (in most versions) TCP/IP, X.25, or other networks. C-Kermit’s full-featured script programming language operates consistently across all of C-Kermit’s platforms and over all types of connections. It allows routine, complex, or time-consuming communications tasks to be executed for you automatically.

[1] Numbers in brackets refer to entries in the References on page 595.

C-Kermit transfers text and binary files faithfully and efficiently with any other kind of computer. The Kermit file transfer protocol takes care of synchronization, error detection and correction, file format and character set conversion, and myriad details you should never have to worry about. It was designed to work in even the most hostile communication environments, where other protocols fail. C-Kermit's Kermit implementation, along with that of MS-DOS Kermit, with which it was codeveloped, is the premiere and definitive rendition of the Kermit protocol.

The Kermit file transfer protocol was originally designed in 1981 by Frank da Cruz and Bill Catchings at Columbia University, which has been "Kermit headquarters" ever since, and extended over the years by the authors and others — principally Joe Doupnik of Utah State University and John Chandler of the Harvard / Smithsonian Astronomical Observatory — to meet the evolving needs of the people who depend on it. Because the Kermit protocol is well documented [21], easy to implement, robust, extensible, and adaptable to almost any style of communication and any computer architecture, it has long since taken its place as a worldwide de facto standard for reliable data transfer.

Acknowledgments

C-Kermit was written by Frank da Cruz of Columbia University with contributions from hundreds of other developers and testers, all of whom have our deepest thanks, with our sincere apologies to anyone else we might have overlooked (U = University, locations are in the USA unless otherwise indicated, and note that affiliations or locations might have changed since the contribution was made):

Chris Adie (Edinburgh U, Scotland); Robert Adsett (U of Waterloo, Canada); Larry Afrin (Clemson U); Jeffrey Altman (Columbia U); Greg Andrews (Telebit Corp); Barry Archer (U of Missouri); Bengt Andersson (ABC-Klubben, Sweden); Robert Andersson (International Systems A/S, Oslo, Norway); Chris Armstrong (Brookhaven National Laboratory); William Bader (Software Consulting Services, Nazareth, PA); Fuat Baran (Columbia U); Stan Barber (Rice U); Jim Barbour (U of Colorado); Donn Baumgartner (Dell Computer Corp); Nelson Beebe (U of Utah); Karl Berry (UMB); Mark Berryman (SAIC); Dean W Bettinger (State U of New York); Gary Bilkus; Peter Binderup (Denmark); David Bolen (Advanced Networks and Services, Inc.) Marc Boucher (U of Montreal, Canada); Charles Brooks (EDN); Bob Brown; Mike Brown (Purdue U); Rodney Brown (COCAM, Australia); Jack Bryans (California State U at Long Beach); Mark Buda (DEC); A. Butrimenko (ICSTI, Moscow); Fernando Cabral (Padrão IX, Brasília, Brazil); Björn Carlsson (Stockholm U Computer Centre QZ, Sweden); Bill Catchings (formerly of Columbia U); Bob Cattani (formerly of Columbia U); Davide Cervone (Rochester U, NY); Seth Chaiklin (Denmark); John Chandler (Harvard U/Smithsonian Astronomical Observatory, Cambridge, MA); Bernard Chen (UCLA); Andrew A Chernov (RELCOM

Team, Moscow); John L Chmielewski (AT&T, Lisle, IL); Howard Chu (U of Michigan); Bill Coalson (McDonnell Douglas); Kenneth Cochran; Bertie Coopersmith (London, England); Chet Creider (U of Western Ontario, Canada); Alan Crosswell (Columbia U); Jeff Damens (formerly of Columbia U); Mark Davies (Bath U, England); Sin-itirou Dezawa (Fujifilm, Japan); Clarence Dold (Pope Valley & Napa, CA); Joe R. Doupnik (Utah State U); Frank Dreano (US Navy); John Dunlap (U of Washington); Alex Dupuy (SMART.COM), Jean Dutertre (DEC France and *Club Kermit*); David Dyck (John Fluke Mfg Co.); Stefaan Eeckels (Statistical Office of the European Community, CEC, Luxembourg); Paul Eggert (Twin Sun, Inc.); Bernie Eiben (DEC); Peter Eichhorn (assyst, Gesellschaft für Automatisierung, Software und Systeme mbH, Kirchheim bei München, Germany); Kristoffer Eriksson (Peridot Konsult AB, Örebro, Sweden); John Evans (IRS, Kansas City); Glenn Everhart (DEC); Vincent Fatica (Syracuse U); Charlie Finan (Cray Research, Darien, CT); Herm Fischer (Encino, CA); Carl Fongheiser (CWRU); Mike Freeman (Bonneville Power Authority); Marcello Frutig (Catholic U, São Pãulo, Brazil); Hirofumi Fujii (Japan National Laboratory for High Energy Physics, Tokyo); Chuck Fuller (Westinghouse); Andy Fyfe (Caltech); Christine M. Gianone (Columbia U); Joseph (Yossi) Gil (Technion, Haifa, Israel); John Gilmore (UC Berkeley); Madhusudan Giyyarpuram (HP France); Rainer Glaschick (Siemens AG, Paderborn); William H. Glass; Hunter Goatley (Western Kentucky U); Malka Gold (Columbia U); German Goldszmidt (IBM); Chuck Goodheart (NASA); Alistair Gorman (New Zealand); Juri Gonastaev (ICSTI, Moscow); Richard Gration (Australian Defence Force Academy); Chris Green (Essex U, England); Alan Grieg (Dundee Tech, Scotland); Volkmar Grote (Hamburg, Germany); Valdemar Gunnarson (Iceland); Yekta Gursel (MIT); Jim Guyton (Rand Corp); Vesa Gynther (Finland); Michael Haertel; Marion Hakanson (ORST); John Hamilston (Iowa State U); Steen Hammerum (U of København, Denmark); Simon Hania (Netherlands); Darryl Hankerson (Auburn University); Stan Hanks (Rice U); Ken Harrenstein (SRI); Eugenia Harris (Data General); David Harrison (Kingston Warren Corporation); James Harvey (Indiana/Purdue U); Rob Healey; Chuck Hedrick (Rutgers U); Ron Heiby (Motorola Computer Group); Steve Hemminger (Tektronix); Christian Hemsing (Rheinisch-Westfälisch Technische Hochschule, Aachen, Germany); Andrew Herbert (Monash U, Australia); Mike Hickey (ITI); Dan Hildebrand (QNX Software Systems Inc., Ontario); R.E. Hill; Bill Homer (Cray Research); Ray Hunter (The ex-Wollongong Group); Randy Huntziger (US National Library of Medicine); Larry Jacobs (Transarc); Xander Jansen (SURFnet, Utrecht, Netherlands); Graham Jenkins (TABCORP, Melbourne, Australia); Steve Jenkins (Lancaster U, England); Bo Johansson (Sweden); Dave Johnson (Gradient Technologies); Mark Johnson (Apple Computer); Jyke Jokinen (Tampere U of Technology, Finland); Eric Jones (AT&T); Luke Jones (AT&T); Peter Jones (U of Quebec, Montreal, Canada); Phil Julian (SAS Institute); Peter Kabal (U of Quebec); Mic Kaczmarczik (U of Texas at Austin); Sergey Kartashoff (Institute of Precise Mechanics & Computer Equipment, Moscow); Howie Kaye (Columbia U); Rob Kedoin (Linotype Co., Hauppauge, NY); Phil Keegstra; Mark Kennedy (IBM); Terry Kennedy (St Peter's College, Jersey City, NJ); Carlo Kid (Technical U of Delft, Netherlands); Tim

Kientzle; Ted Kilgore (Auburn U); Paul Kimoto (Cornell U); Douglas Kingston; Lawrence Kirby (Wiltshire, England); John Klensin (United Nations University); Kurt Klingbeil (Province of Alberta); Tom Kloos (Sequent Computer Systems); Jim Knutson (U of Texas at Austin); John T. Kohl (BSDI); Scott Kramer (SRI International); John Kraynack (US Postal Service); David Kricker (Encore Computer); Thomas Krueger (U of Wisconsin at Milwaukee); Bo Kullmar (Central Bank of Sweden, Kista, and ABC-Klubben, Stockholm); R. Brad Kummer (AT&T Bell Labs, Atlanta, GA); John Kunze (UC Berkeley); David Lane (Stratus Computer Inc); Russell Lang (Monash U, Australia); Bob Larson (USC); Bert Laverman (Groningen U, Netherlands); Steve Layton; David Lawyer (UC Irvine); David LeVine (National Semiconductor Corp.); Daniel S. Lewart (UIUC); S.O. Lidie (Lehigh U); Tor Lillqvist (Helsinki U, Finland); Robert Lipe (Arnet Corp); Benny Löfgren (DIAB, Sweden); Dean Long; Mike Long (Analog Devices); Kevin Lowey (U of Saskatchewan, Canada); Andy Lowry (Columbia U); James Lummel (Caprica Telecomputing Resources); David MacKenzie (Environmental Defense Fund, U of Maryland); John Mackin (U of Sidney, Australia); Martin Maclaren (Bath U, England); Chris Maio (formerly of Columbia U); Montserrat Mané (HP France); Fulvio Marino (Olivetti, Ivrea, Italy); Arthur Marsh (DIRCSA, Australia); Peter Mauzey (AT&T); Tye McQueen (Utah State U); Ted Medin (NOSC); Ajay Mehta (DEC); Melissa Metz (Columbia U); Hellmuth Michaelis (Hanseatischer Computerservice GmbH, Hamburg, Germany); Leslie Mikesell (American Farm Bureau); Gary Mills (U of Manitoba, Canada); Martin Minow (DEC); Pawan Misra (Bellcore); Ken Mizialko (IBM, Manassas, VA); Ray Moody (Purdue U); Bruce J. Moore (Allen-Bradley Co); Steve Morley (Convex); Peter Mossel (Columbia U); Tony Movshon (NYU); Lou Muccioli (Swanson Analysis Systems); Dan Murphy; Neal P. Murphy (Harsof Systems, Wonder Lake, IL); Gary Mussar (Bell Northern Research); John Nall (Florida State U); Jack Nelson (U of Pittsburgh); Jim Noble (PRC, Inc.); Ian O'Brien (Bath U, England); John Owens; Michael Pins (Iowa Computer Aided Engineering Network); André Pirard (U of Liège, Belgium); Paul Placeway (Ohio State U); Piet Plomp (Groningen U, Netherlands); Ken Poulton (HP Labs); Manfred Prange (Oakland U); Christopher Pratt (APV Baker, UK); Frank Prindle (NADC); Tony Querubin (U of Hawaii); Phil Race (ICL, Manchester, England); Jean-Pierre Radley; Anton Rang; Ruth Raphaeli (Columbia U); Scott Ribe; Alan Robiette (Oxford U, England); Michel Robitaille (U of Montreal, Canada); Huw Rogers (Schweizerische Kreditanstalt, Zürich); Kai Uwe Rommel (Technische Universität München, Germany); Judith Rosenhouse (Technion, Haifa, Israel); Larry Rosenman (Irving, TX); Jay Rouman (U of Michigan); Jack Rouse (SAS Institute); Stew Rubenstein (Harvard U); Cory Sane (Medical U of SC); Bill Schilit (Columbia U); Ulli Schlüter (RWTH Aachen, Germany); Michael Schmidt (U of Paderborn, Germany); Eric Schnoebelen (Convex); Benn Schreiber (DEC); Dan Schullman (DEC); John Schultz (3M); Steven Schultz (GTE Government Systems Corp); APPP Scorer (Leeds Polytechnic, England); Gordon Scott (Micro Focus, Newbury, England); Jay Sekora (Princeton U); Gisbert W. Selke (Wissenschaftliches Institut der Ortskrankenkassen, Bonn, Germany); David Singer (IBM Almaden Research Labs); David Sizeland (U of London Medical

School, England); Friðrik Skulason (Iceland); Rick Sladkey; Dave Slate; Bradley Smith (UCLA); Fred Smith (Merk); Richard Smith (California State U); Ryan Stanisfer (UNT); Bertil Stenström (Stockholm U Computer Centre QZ, Sweden); James Sturdevant (CAP GEMINI AMERICA, Minneapolis, MN, and Medtronic, Inc., Fridley, MN); Margarita Suarez (Columbia U); Peter Svanberg (Kungl. Tekniska Högskolan, Sweden); James Swenson (Accu-Weather, Inc., State College, PA); Chris Sylvain (U of Maryland); Andy Tanenbaum (Vrije U, Amsterdam, Netherlands); Tim Theisen (U of Wisconsin); Glen Thobe; Lee Tibbert (DEC); Markku Toijala (Helsinki U of Technology, Finland); Teemu Torma (Helsinki U of Technology, Finland); Linus Torvalds (Helsinki, Finland); Rick Troxel (US National Institutes of Health); Warren Tucker (Tridom Corp, Mountain Park, GA); Dave Tweten (NASA); G. Uddeborg (Sweden); Walter Underwood (Ford Aerospace); Pieter Van Der Linden (Centre Mondial, Paris, France); Ge van Geldorp (Netherlands); Fred van Kempen (MINIX User Group, Voorhout, Netherlands); Johan van Wingen (Leiden, Netherlands); Wayne Van Pelt (General Electric Corporate Research and Development); Mark Vasoll (Oklahoma State U); Don Vickers (DECUS); Konstantin Vinogradov (ICSTI, Moscow); Paul Vixie (DEC); Bernie Volz (Process Software); Eduard Vopicka (Prague School of Economics, Czech Republic); Dimitri Vulis (D&M Consulting Services, NYC); Roger Wallace (Raytheon); Stephen Walton (California State U at Northridge); Jamie Watson (Adasoft, Switzerland); Rick Watson (U of Texas); Robert Weiner (Programming Plus, New York City); Lauren Weinstein (Vortex Technology); Clark Wierda (Illuminati Online, Austin TX); David Wexelblat (AT&T Bell Labs); Bill Whitney (DEC); Joachim Wiesel (U of Karlsruhe, Germany); Lon Willett (U of Utah); Michael Williams (UCLA); Nate Williams (U of Montana); David Wilson; Joellen Windsor (U of Arizona); Patrick Wolfe (Kuck & Associates, Inc.); Gregg Wonderly (Oklahoma State U); Farrell Woods (Concurrent); David Woolley (London, England); Jack Woolley (SCT Corp); Frank Wortner; Ken Yap (U of Rochester, NY); John Zeeff (Ann Arbor, MI); Martin Zinser (Gesellschaft für Schwerionenforschung GSI, Darmstadt).

The second edition brings *Using C-Kermit* up to date with C-Kermit 6.0. The changes are too numerous to list, but noteworthy among them is the new “intelligent and portable” dialing directory (Chapter 5), whose design required an education in the art of dialing telephones. For their help with this work, grateful thanks to Pat Townsend for moderating the comp.dcom.telecom newsgroup, a goldmine of telephony information and expertise, and to those who assisted directly, especially: Toby Nixon (Program Manager, Windows Telephony, Microsoft Corporation); Dave Kramer (Head of International Consumer Markets, Sprint International); Bernard Lyons (IS Specialist, Claris Ireland); Ken Levitt (Informed Computer Solutions, Wayland, MA); Mark Brader (SoftQuad Inc., Toronto); Martin Kealey (Auckland, New Zealand); and David Woolley (London, England).

Big thanks, as always, to the “Kermites,” who do such an amazing job of technical and customer support while running our day-to-day production operations so smoothly: Max Evarts, Andy Newcomb, and the generations who came before, especially Bob Tschudi, Peter Howard, Lucy Lee, and Ken Suh.

A special note of appreciation to Jeffrey Altman, for some years a (prodigious) volunteer contributor to the Kermit Project, and now a full-time developer on the Kermit team, for massive contributions to C-Kermit 6.0 — and not just code, but energy, enthusiasm, and great ideas too.

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And finally, thanks to our management and colleagues at Columbia University for their encouragement and support, especially Vaçe Kundakçı, Deputy Vice President for Academic Information Systems, and Elaine Sloan, Vice President for Information Services and University Librarian; to Bruce Gilchrist and Howard Eskin, directors of our organization during the early days of Kermit; to Alan Crosswell and the AcIS Systems Group for taking care of our well-known server, kermit.columbia.edu, and for help in many other forms; and to Lee Lidofsky, a Great Teacher, for a timely push in a good direction, a long time ago.

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IMPORTANT:

This edition of *Using C-Kermit* is current as of C-Kermit version 6.0.192. Any changes made after this edition was published, but before the next edition is published, are listed in an online file that accompanies the C-Kermit software. The name of the file depends on the operating system and distribution method, but will generally begin or end with the characters “UPD” — CKERMIT.UPD, CKCKER.UPD, UPDATES.DOC. Be sure to consult this file to learn about new features.

Other supplemental online documentation files include “beware” files, whose names end with “.BWR”, which contain current information about bugs and restrictions, with suggested workarounds, for C-Kermit in general (CKCKER.BWR), and for particular implementations (`ckuker.bwr` for UNIX, CKVKER.BWR for VMS, etc). There are also files containing detailed installation instructions for each operating system (CK*INS.DOC), plus a configuration guide (CKCCFG.DOC) and a program logic manual (CKCPLM.DOC).

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Next file >>