



## Frank da Cruz Kermit records inventory, 1968-2006

The content of the following inventory was provided by Frank Da Cruz. This is an abbreviated version that lists only those items residing at CHM. Da Cruz's complete collection inventory can be viewed at <http://www.columbia.edu/cu/computinghistory/books/#kermit>

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### **ARPANET [Box #9]**

Before there was the Internet there was the ARPANET, with extremely selective membership. Columbia joined the ARPANET in 1984.

- *ARPANET Information Brochure*, Defense Communications Agency NIC 50003 (December 1985). Overview of policies and services.
- Malman, J., *Terminal Interface Message Processor: User's Guide to the Terminal IMP*, Prepared for the Advanced Projects Research Agency, distributed by NTIS, August 1975. The TIP provided dialup access to the ARPANET.

- *Using the ARPANET from NYU*, 26 Jan 1979, photocopy. NYU had one 110-baud number and four 300-baud numbers. Columbia's access to the ARPANET in the 1970s and early 80s was via a guest ID on the NYU TIP.
- *ARPANET Protocol Handbook*, Network Information Center, Distributed by NTIS, January 1978 (2 copies). This contains a complete map of every host on the ARPANET as of September 1977 and specifications for all the protocols used over NCP, which was the precursor to TCP/IP: Telnet, FTP, Mail, Remote Job Entry, Network Graphics Protocol, Network Time Server Protocol, Finger/Name Protocol, and NCP assigned numbers.
- Feinler, Elizabeth J., et al., *ARPANET Resource Handbook*, Network Information Center, Distributed by NTIS, October 1978. This book lists all the hosts on the ARPANET, their architecture, operating systems, and applications, with contact names. In those days, most sites on the ARPANET gave out guest IDs to people from other ARPANET sites, as a way of sharing resources and expertise.
- *DDN Directory*, Defense Communications Agency (June 1984). This is a directory of every individual on the ARPANET, approximately 14,000 people, with name, address, phone, and email address, me included (FDC@COLUMBIA-20.ARPA), as well as a list of every host on the ARPANET with its IP address and operating system, about 440 of them in all.

### **TCP/IP and Other Networking Texts [Box #9]**

- Tanenbaum, Andrew S., *Computer Networks*, Second Edition, Prentice-Hall (1988). Hardcover. Andy is a Kermit contributor and author of MINIX, which was the inspiration for Linux.
- da Cruz, Frank, and Christine Gianone, *Understanding Data Communications Protocols and Software*, unpublished manuscript (1988). This was the text of a Columbia University Special Programs course conducted in 1987 and 1988, *Telecommunications Software*. The object (never actually achieved) was for the class to develop an entire protocol suite on PCs over serial ports (because in those days network adapters were not commonly found on PCs, and in any case the ones in our lab did not have them). Digital Press was going to publish this book but we never finished it.
- Lynch, Daniel C., and Marshall Rose, *Internet System Handbook*, Addison-Wesley (1993). Hardcover.
- Comer, Douglas, *Internetworking with TCP/IP: Principles, Protocols, and Architectures*, Prentice-Hall (1988). First Edition.
- Comer, Douglas, *Internetworking with TCP/IP, Volume I: Principles, Protocols, and Architectures*, Prentice-Hall (1991). Second Edition.
- Comer, Douglas, *Internetworking with TCP/IP, Volume II: Design, Implementation, and Internals*, Prentice-Hall (1991). Second Edition.
- Schwartz, Mischa, *Telecommunications Networks: Protocols, Modeling and Analysis*, Addison-Wesley (1987). Columbia's own Mischa Schwartz.

### **Kermit Software [Box #9]**

This box contains software in an assortment of floppy disks and CD-ROMs. This includes thirty-two (32) 3 ½" floppy disks, seven (7) CD-ROMs, one-hundred (100) 5 ¼" floppy disks, and one (1) 8" floppy disk. All software is various versions of Kermit or software relating to the development and support of Kermit.

### **Kermit Protocol and Software [Box #12]**

Founded at the Columbia Computer Center in 1980, with the first software products deployed in 1981, the Kermit Project was responsible for a worldwide de facto standard transport- and platform-independent file transfer protocol and a suite of software programs that implemented it for many computers and operating system over a 30-year span until the Kermit Project was canceled by Columbia University at the end of June 2011. The Kermit Project was not only one of the original pioneers of free and open software, it also produced over eight million dollars in revenue for Columbia. For an overview of the Kermit Project, see <http://www.columbia.edu/kermit/kermit.html>.

- da Cruz, Frank, *Kermit, A File Transfer Protocol*, Digital Press, Bedford MA (1987), ISBN 0-932376-88-6. Foreword by Donald Knuth. Paperbound, 8½x10". The first Kermit book. Contains the Kermit Protocol definition. It remained in print from 1986 until 2001. That must be some kind of record for a computer book. The title was to have been "The Kermit File Transfer Protocol", but the cover designer changed it for layout reasons. A Russian edition was in preparation by the USSR Akademia Nauk prior to the dissolution of the Soviet Union.
- *EDU Magazine* (Winter 1987), with ad for Kermit book.
- *Пакеты прикладных программ телеобработки данных на микроЭВМ*, Библиотека МикроДОС, Выпуск 47, Международный Центр Научной и Технической Информации (МЦНТИ), Москва (*Application Program Package for Data Teleprocessing on Microcomputers*, MicroDOS Library, Issue 47, USSR International Centre for Scientific and Technical Information [ICSTI], Moscow) (1987). (COVER) Kermit software and protocol in the Soviet Union.
- ПРОГРАММА ПЕРЕДАЧИ ФАЙЛОВ КУРЬЕР-3/КАМА, Версия 2.2 (январь 1989): Руководство по эксплуатации. File Transfer Program Courier-3/KAMA, Version 2.2 (January 1989), Operation manual. Prior to the International Kermit Conference in Moscow in May 1989, the Russians didn't believe they could use the name Kermit, so they called the protocol Courier. This is the user manual for the version of Kermit on the Soviet version of the IBM System/370, ЕС БЭСМ [PDF].
- Gianone, Christine M., *Using MS-DOS Kermit*, Digital Press, Bedford MA (1990), ISBN 1-55558-048-3. Paperbound, 7¼x9¼". The first published Kermit software manual. Corresponds to MS-DOS Kermit 3.00. Includes 5½" diskette.
- Gianone, Christine M., *Using MS-DOS Kermit*, Digital Press, Bedford MA (1990). With MS-DOS Kermit 3.01 as an IBM product, packaged with IBM LAN Asynchronous Communication Server (LANACS) 2.0 under license with the Kermit Project.
- Gianone, Christine M., *Using Mac Kermit*, Unpublished Manuscript (1991). Kermit 1.0 user manual for the Macintosh, never before seen (unfortunately Macintosh Kermit 1.0

was never released due to disappearing programmers). This is a draft, some sections were not written yet.

- Gianone, Christine M., *Using MS-DOS Kermit*, Second Edition Manuscript reviewed by [Cliff Stoll](#) (1991).
- Gianone, Christine M., *Using MS-DOS Kermit*, Second Edition, Digital Press, Burlington MA (1992), ISBN 1-55558-082-3. *MS-DOS Kermit 3.11 and later*. Paperbound, 7¼x9¼". Includes 3½" diskette.
- Gianone, Christine M., *Using MS-DOS Kermit*, Second Edition, Digital Press, Burlington MA (1992). Rare copy with a light blue cover.
- Gianone, Christine M., *MS-DOS-Kermit, das universelle Kommunikationsprogramm*, Verlag Heinz Heise, Hannover (1992), ISBN 3-88229-006-4. Hardcover. German translation by Gisbert W. Selke.
- Gianone, Christine M., *MS-DOS-Kermit, Mode d'Emploi*, Heinz Schiefer & Cie., Versailles (1993), ISBN 2-901143-20-2. French translation by Jean Dutertre.
- 藤井啓文, 湯浅富久子, *MS-Kermit入門*, Computer Todayライブラリ-6, サイエンス社, 日本 (Fujii, Hirofumi, and Fukuko Yuasa, *MS-Kermit Primer*, Computer Today 6, Saiensu-Sha Co., Ltd.), Tokyo (1993) ISBN 4-7819-0669-9 C3355 P1854E. ([COVER](#)) Explains Kermit to the Japanese audience, focussing on the MS-DOS Kermit version for the NEC PC-9801.
- da Cruz, Frank, and Christine M. Gianone, *Using C-Kermit*, Digital Press, Burlington MA (1993), ISBN 0-55558-108-0. *C-Kermit 5A*. There was also an edition of this book with a special cover for Lucent technologies, which shipped thousands of copies with its communications and networking products.
- da Cruz, Frank, and Christine M. Gianone, *C-Kermit: Einführung und Referenz*, Verlag Heinz Heise, Hannover (1994), ISBN 3-88229-023-4. Hardcover. German translation by Gisbert W. Selke.
- Gianone, Christine M., and Frank da Cruz, *Kermit 95*, Manning Publications, Greenwich CT (1996). The original Kermit 95 manual in printed form (subsequent editions issued electronically).
- da Cruz, Frank, and Christine M. Gianone, *Using C-Kermit*, Second Edition, Digital Press / Butterworth Heinemann, Newton MA (1997), ISBN 0-55558-164-1. For C-Kermit C-Kermit 6.0.
- [Kermit News](#) issues 1-6, 1986-1995

#### Other Books that Discuss Kermit [Box #12]

- Gofton, Peter W. *Mastering Serial Communications*, SYBEX, Berkeley CA (1986), ISBN 0-89588-180-2. *Includes a chapter on Kermit protocol*.
- Kelly-Bootle, Stan, *680x0 Programming By Example*, Howard W Sams & Co, Indianapolis IN (1988), ISBN 0-672-22544-1. Uses the Alpha Micro version of Kermit to illustrate Motorola 68000 assembly-language programming.
- McNamara, John, *Technical Aspects of Data Communication*, Third Edition, Digital Press, Bedford MA (1988), ISBN 1-55558-007-6. The data communications "bible". Discusses Kermit as an example of a byte-count oriented protocol.

- Stoll, Clifford: *The Cuckoo's Egg: Tracking a Spy Through the Maze of Computer Espionage*, Doubleday, New York (1989), ISBN 0-385-24946-2. How German spies used Kermit to break into US computers and networks for the KGB. Hardbound, autographed.
- Sawey, Ronald M., and Troy T. Stokes, *A Beginner's Guide to VAX/VMS Utilities & Applications*, Digital Press (1989).
- Quarterman, John, *The Matrix: Computer Networks and Conferencing Systems Worldwide*, Digital Press, Bedford MA (1990), ISBN 1-55558-033-5. Forewords by Tracey L. LaQuey, Vinton G. Cerf, and Frank da Cruz. Illustrates the role of Kermit in the worldwide "matrix" of interconnected computers circa 1990, before the Internet and the Web became ubiquitous.
- Gofton, Peter W. *Mastering UNIX Serial Communications*, SYBEX, Berkeley CA (1991), ISBN 0-89588-180-2, Appendix C: The Kermit Protocol.
- Huggins, James, "Kermit Protocol - Formal Specification and Verification", in Egon Börger, Ed., *Specification and Validation Methods*, Oxford University Press, Oxford (1995). In this paper, the Kermit protocol is formally specified and proven correct.
- Kientzle, Tim, *The Working Programmer's Guide to Serial Protocols*, Coriolis Group Books, Scottsdale AZ (1995), ISBN 1-883577-20-9. Compares Kermit with other protocols such as Zmodem, and includes original source code for each protocol.
- Newton, Harry, *Newton's Telecom Dictionary*, Telecom Books & Flatiron Publishing (1998), with new-and-improved entry on Kermit and some correspondence explaining it.

#### Other Kermit Publications and Articles [Box #13]

- *The Kermit Software Catalog*, many editions, 1980s-90s.
- Kermit User Guide in Japanese from NTT (1984)
- Kermit Protocol Manual in Japanese from NTT (1984)
- Kermit-Ohjelmiston Käsikirjat (Kermit User Guide and Protocol Manual), Helsinki University of Technology (1983)
- Kermit-Ohjelmiston Käsikirjat (Kermit User Guide and Protocol Manual), Helsinki University of Technology (1984)
- Kermit-Ohjelmiston Käsikirjat (Kermit User Guide and Protocol Manual), Helsinki University of Technology (1984, a newer edition)
- *Applicon Kermit Users Manual*, Preliminary Version, Applicon Schlumberger (December 1986).
- *Kermit Packages for CP/M-80, MS-DOS, UNIX*, Reference Manuals, SGS Systems Division, O.C.:DAKERPKG/1, Italy (1986).
- Koppány, Janos, *Mikrolink Kommunikációs Program Installáció Kézikönyv* (Portable Kermit), Budapest (1985-86).
- da Cruz, Frank, *Manual do Protocolo Kermit*, tradução de J. Ricardo B. Ghirlanda, Telecomunicações Brasileiras S.A. - TELEBRAS, Brasília (1986).
- da Cruz, Frank, *Kermit- Guia do Usário*, quinta edição, tradução de J. Ricardo B. Ghirlanda, Telecomunicações Brasileiras S.A. - TELEBRAS, Brasília (1986).
- *Kermit File Transfer Package*, National Institutes of Health (August 1986).

- Gianone, Christine M., Kermit File Transfer Protocol, *EDU Magazine*, Digital Equipment Corporation, No.44 (Spring 1987), pp.35-37.
- da Cruz, Frank, and Christine M. Gianone, Shopping for Software that Lets PCs Chat with Mainframes, *Data Communications Magazine*, McGraw Hill (December 1987), pp.155-171.
- Gianone, Christine M., Frank da Cruz, and Paul Placeway, *Macintosh Kermit User Guide* (May 1988)
- Gianone, Christine M., Frank da Cruz, and Joe Douppnik, *MS-DOS Kermit User Guide*, for Version 2.31 (July 1988)
- Gianone, Christine M., and Frank da Cruz, "Making PC Software Work with Digital PBXs", *Data Communications Magazine*, McGraw Hill (October 1988). Cover story of this issue, discusses the installation of the IBM/ROLM CBX at Columbia and shows how to adapt PC software designed for analog phones and modems to work with it, with automation examples based on Kermit. pp.128-157.
- International Kermit Conference, Moscow USSR 1989: Materials, handouts, photos, slides, and a documentary film.
- Lowe, Sue J., "Kermit to Speak non-ASCII: Greek, Russian, et al.", *Data Communications Magazine* (June 1989). Also in *Data Communications International* (June 1989).
- *Kermit pour Micros PC IBM et Compatibles*, Version 2.32, L'informatique, Université du Québec à Montréal (1989).
- *Kermit pour Micros Macintosh*, Version 0.9(40) L'informatique, Université du Québec à Montréal (1990).
- "Electronic Leapfrog", *Columbia Magazine*, Fall 1990, p.30. Short article on Kermit, with photo.
- Russel, Anne M., "Must-reads for PC buffs", *Working Woman* (Sept 1990), p.94. Mini-review of *Using MS-DOS Kermit* in a mainstream magazine.
- Sovern, Michael, "Towards 2000", Section "A Foundation for the Future", Subsection "Computing", *Columbia Magazine*, Winter 1990, p.29. Highlights Kermit in the first paragraph.
- Oblitey, William, Review of *Using MS-DOS Kermit*, *ACM Computing Reviews* Vol.32 No.6 (June 1991).
- Digital Press 1991 Catalog, with *Using MS-DOS Kermit* and *Kermit A File Transfer Protocol* featured on the cover and inside.
- KERMIT: Data Management Over the Phone, *Hewlett-Packard BASIC News*, Vol.1 Issue 2 (1991)
- Douppnik, Joe, MS-DOS Kermit Adds TCP/IP Communications via Packet Drivers, *CONNECT 10*, North Carolina State University Computing Center, Vol.3, No.2 (October 1991).
- Gianone, Christine M., "Supplementing Your Network with Kermit Communications Software" *International Journal of Network Management*, Vol.1 No.2 (December 1991), pp.74-81.
- Kullmar, Bo, ÅÄÖ och C-Kermit, *ABC Bladet* (1992 No.3).

- Rafaelli, Andrea, and Andries P. Bruins, Data Transfer from a DEC PDP-11 Based Mass Spectrometry Data Station to an MS-DOS Personal Computer, *Rapid Communication in Mass Spectrometry*, Vol.6, 582-584 (1992).
- da Cruz, Frank, Sanningen om Kermits filöverföringsportokoll, *ABC Bladet* (1993 No.4).
- Kermit Gets Brazil's National Vote, *Columbia University Record*, October 14, 1993.
- Kermit and Frank da Cruz, *New York Unix*, Vol.2 Ed.1 (1993).
- Kennedy, Terry, C-Kermit Update for OpenVMS Users, *DECUS 93*, Vol.1 No.1 (Fall 1993).
- Grumball, Kevin, A Pool Became an Ocean, *Financial Times*, April 26, 1994 (A-Z of Computing 10).
- da Cruz, Frank, *Interchange of Non-English Computer Text*, (1994). Submitted to ACM Computing Surveys but not published. An overview of standard and proprietary computer character sets and Kermit protocols for identifying them and converting them.
- da Cruz, Frank, "Circumnavigating the Web with MS-DOS Kermit", *On The Internet*, Internet Society, Vol.1 No.2 (May/June 1995), pp.48-52.
- Larkin, Michael, International Space Station Incorporates Columbia's Kermit Software Program, *Columbia Record* (12 November 2003). Also in *Space Daily*, 9 December 2003.

#### **Kermit Publicity Binders [Box #14]**

Three-ring binders with articles, brochures, press clippings, photos, etc, mounted in plastic.

- Binder 1: Books, book fairs, German flyer, reviews from *ACM Computing Reviews*, *Working Woman*, *Link-Up*, *Government Computer News*, *American Association of Physicists in Medicine*, *Educom Review*, *Columbia University Record*; IBM LANACS product cover with MS-DOS Kermit; Digital Press Flyer; Digital Press Order Form; Digital Press Catalogs; Ad in Communications of the ACM; Wiley Catalogs; DEC Insight item; cuttings from other books.
- Binder 2: Kermit News Numbers 1-4.
- Binder 3: C-Kermit book; Digital Press flyers. Review of the German Edition of *Using MS-DOS Kermit* from a German magazine; some Kermit publicity in Japanese. Bibliographic citations to Kermit papers in academic journals; an ad for *Using MS-DOS Kermit* in *PC Computing* (June 1992); cuttings from *PC Week*, *Unix World*, *T.H.E. Journal*; a feature article in *DEC Professional* magazine; many others cuttings of this nature in English, German, and Swedish; a copy of Kermit News Number 5.
- Binder 4: Conference materials. Japan DECUS 1987 in Tokyo; International Kermit Conference in Moscow USSR, May 1989 (program, handouts, news release, press reports in the USA and USSR); DECUS Symposia in the USA and Switzerland; Software Publishers Association.
- Binder 5: Columbia U publications. *Columbia Magazine*, *Columbia Record*, *Computer Center Newsletter*; *Preparing for Data Communication with the CBX*, *Columbia University Directory* (which included a section written by the Kermit staff on how to use the data features of the ROLM phone). Courses taught in the CU Division of Special Programs and in the Computer Center.

- Binder 6: Articles published in the International Journal of Network Management, PC Week, Data Communications, Computerworld, EDU Magazine, Japanese PC World, Japanese Computer Today, Digital Review, Microsoft Systems Journal, The C Users Journal.
- Binder 7: Press releases and clippings from newspapers and magazines.

### **Kermit Press Clippings [Box #15 and 16]**

Articles about and announcements of Kermit software from the trade press, user group and university newsletters, training catalogs, etc. Loose.

### **Info-Kermit Digest; C-Kermit 7.0 and 8.0 Release Notes [Box #17]**

#### **Kermit Files [Box #21 and 22]**

This is in addition to whatever is in Box 8. Manila folders containing correspondence, proposals, discussions, specifications of new features, documentation of other protocols we looked at and rejected before designing Kermit, history of various specific Kermit versions, the 1984 Kermit articles in *BYTE* magazine, Kermit adaptations for blind people and deaf people, Kermit adaptations for transfer of Japanese, Hebrew, and Cyrillic text between unlike platforms in the pre-Unicode days. Adaptation of Kermit by IBM for its PC networking product. Original unopened shrinkwrapped copies of Kermit 95 in its three different packages. Also:

- da Cruz, Frank, and Bill Catchings, "Kermit: A File Transfer Protocol for Universities", *BYTE Magazine*, Volume 9, Numbers 6 and 7, June and July 1984. The first published Kermit article, written in 1983, publication delayed for a year while BYTE waited for an appropriate theme issue. BYTE also changed the original title, "The Kermit File Transfer Protocol", to fit its Computing in Academia theme, over our objections.
- The fake LIFE magazine cover from the 1981 Muppets calendar that inspired the name Kermit for the protocol, software, and project.
- COMPUTERWORLD, July 4, 2005, with me on the front page.
- Columbia University website home page, November 20, 2003, featuring "International Space Station Incorporates Columbia's Kermit Program".

#### **Courses [Box #22]**

- CU Division of Special Programs catalogs 1986-92, listing Kermit and Telecommunications courses taught by members of the Kermit Project.
- Course notes and syllabus for Q0712, *Telecommunications Software* (1987).
- Course notes and syllabi for Q0280, *Introduction to Kermit*; Q0282, *Fast-paced Kermit*, and Q0284, *Installation, Support, and Advanced Use of Kermit* (1986-87).
- Course notes and materials for 4-week telecommunications course given at Citibank March-April 1988.
- Also, notes for a course given to Columbia and Jewish Theological Seminary faculty in 1994 on how to have Hebrew text on a PC, including in a terminal session with the



central mainframes (I think I already put this in another box). (Note, this was before Windows 95, when everything was do-it-yourself.)

### **Character-Set Standards [Box #25]**

This material will be essential for decades or centuries to come for deciphering computer text from the 1930s through about 2000.

- *ANSI X3.64-1979: Additional Controls for Use with American National Standard Code for Information Interchange* (1979). This is the basis for the ANSI terminal definition, first implemented in the DEC VT100 terminal.
- *ISO International Register of Coded Character Sets* (1968-1996). This is a 4½-inch-thick binder containing the specification for every ISO-registered character set prior to Unicode / ISO 10646, including ANSI, ISO, ECMA, JIS, GOST, and many other international and national standards bodies.
- *ECMA-6: 7-Bit Coded Character Set*, 5th Ed. (1985).
- *ECMA-35: Code Extension Techniques* (1985). Equivalent to ISO 2022.
- *ECMA-43: 8-Bit Coded Character Set Structure and Rules* (1985). Equivalent to ISO 4873.
- *ECMA-48: Control Functions for Coded Character Sets* (1991). Equivalent to ISO 6429.
- *ECMA-94: 8-Bit Single-Byte Coded Graphic Character Sets: Latin Alphabets No.1 to No.4* (1986)
- *ECMA-113: 8-Bit Single-Byte Coded Graphic Character Sets: Latin/Cyrillic Alphabet*, (1988)
- *ECMA-114: 8-Bit Single-Byte Coded Graphic Character Sets: Latin/Arabic Alphabet*, (1986)
- *ECMA-118: 8-Bit Single-Byte Coded Graphic Character Sets: Latin/Greek Alphabet*, (1986)
- *ECMA-121: 8-Bit Single-Byte Coded Graphic Character Sets: Latin/Hebrew Alphabet*, (1987)
- *ECMA-128: 8-Bit Single-Byte Coded Graphic Character Sets: Latin Alphabet No.5*, (1988)
- ECMA Technical Report TR/53: Handling of Bi-Directional Texts, 2nd Ed. (1992)
- *ISO 646: Information Processing — 7-Bit Coded Character Set for Information Interchange*, 2nd Ed. (1983).
- *ISO/IEC 2022: Information Technology &mdash; Character Code Structure and Extension Techniques*, Third Ed. (1986).
- *ISO Standard 4873: Information Technology &mdash; ISO 8-Bit Code for Information Interchange — Structure and Rules for Implementation*, Second Ed. (1986). Photocopy.
- *ISO/IEC 2022: Information Technology &mdash; Character Code Structure and Extension Techniques*, Fourth Ed. (1994).
- *ISO/IEC 6429: Information Technology &mdash; Control Functions for Coded Character Sets*, Third Ed. (1992).
- *ISO 8859-1: Information Processing — 8-Bit Single-Byte Coded Graphic Character Sets — Part 1: Latin Alphabet No.1*, 1st Ed. (1987)

- *ISO/IEC 10646-1: Information Technology — Universal Multiple-Octet Coded Character Set (UCS) — Part 1: Architecture and Basic Multilingual Plane*, 1st Ed. (1993), with 11 amendmends. This is the international standard that corresponds with Unicode 1.0.
- *USMARC Specifications for Record Structures, Character Sets, Tapes*, U.S. Library of Congress (1987).

### **Proprietary Character Sets [Box #25]**

Most of these are listed in terminal manuals or OS manuals. IBM was one of the few companies that devoted serious publications to its character encodings. The manuals in this section were published for IBM internal use only.

This material, too, will be essential for decades or centuries to come for deciphering computer text from the 1930s through about 2000.

- *National Language Information and Design Guide, Volume 1: Designing Enabled Products, Rules and Guidelines*, IBM National Language Technical Centre, Ontario (1987).
- *National Language Support Reference Manual, Volume 2*, IBM National Language Technical Centre, Ontario (1990).
- *Character Data Representation Library: Character Data Representation Architecture, Executive Overview*, IBM (1990).
- *Character Data Representation Library: Character Data Representation Architecture, Level 1 Reference*, IBM (1990).
- *Character Data Representation Library: Character Data Representation Architecture, Level 1 Registry*, IBM (1990). 715 pages.
- *National Language Design Guide, Volume 2: National Language Support Reference Manual*, 4th Ed., IBM (1994). Paperbound.
- *Keyboards and Code Pages for OS/2 Warp (PowerPC Edition)*, 1st Ed. (1995). Tables of all the IBM Code Pages, including the EBCDIC one. Extremely rare, since OS/2 Warp was never released for the PowerPC.

### **Unicode [Box #25]**

Unicode is the universal computer character set encompassing all the world's scripts and writing systems, replacing the hundreds or thousands of different and incompatible text encodings used on computers throughout the 20th Century with a single universal encoding, now the predominant coding in the Internet, in Windows, and in Unix. Columbia University (the Kermit Project) was a member of the Unicode Consortium and played a role in the development of Unicode, and was an early implementor of Unicode support in its Kermit software.

- *The Unicode Standard: Worldwide Character Encoding: Version 1.0, Volume 1* (October 1991)
- *The Unicode Standard: Worldwide Character Encoding: Version 1.0, Volume 2* (June 1992)
- *The Unicode Standard: Version 2.0* (July 1996).

- *The Unicode Standard: Version 3.0* (January 2000). Frank da Cruz, Columbia University on p.v of the Acknowledgements.
- *The Unicode Standard 4.0* (August 2003). Frank da Cruz, Columbia University on p.vii of the Acknowledgements.
- *The Unicode Standard 5.0* (October 2006). This is the last version of the Unicode standard published in book form.

#### **Other Publications Related to Character Sets [Box #25]**

- McKenzie, C.E., *Coded Character Sets, History and Development*, Addison-Wesley (1980). The early history of text representation in IBM accounting machines and computers, extremely detailed, an invaluable reference to this day.
- *Standards for the Electronic Exchange of Personal Data, Part 5: Character Sets*, Netherlands Ministry of the Interior (1995).
- *ASCII and EBCDIC: Character Set and Code Issues in Systems Application Architecture*, SHARE SSD #366 (1989).

#### **CCITT Blue Books [Box #26]**

International Telecommunications Union. All paperbound, blue, 8¼x11¾". If I'm not mistaken, this set of volumes cost about \$4000.

- Volume II - Fascicle II.1: General Tariff Principles / Charging and Accounting in International Telecommunications Services. Series D Recommendations (Geneva 1989).
- Volume II - Fascicle II.2: Telephone Network and ISDN - Operation, Numbering, Routing and Mobile Service. Recommendations E.100-E.333 (Geneva 1989).
- Volume II - Fascicle II.3: Telephone Network and ISDN - Quality of Service, Network Management and Traffic Engineering. Recommendations E.401-E.880 (Geneva 1989).
- Volume II - Fascicle II.4: Conformance Testing Procedures for the Teletex Recommendations. Recommendations T.64 (Geneva 1989).
- Volume II - Fascicle II.6: Message Handling and Directory Services. Recommendations F.400-F.422, F.500 (Geneva 1989).
- Volume III - Fascicle III.5: Digital Networks, Digital Sections and Digital Line Systems. Recommendations G.801-G-961 (Geneva 1989).
- Volume III - Fascicle III.7: Integrated Digital Network (ISDN) / General Structure and Service Capabilities Recommendations I.110-I.257 (Geneva 1989).
- Volume III - Fascicle III.8: Integrated Digital Network (ISDN) / Overall Network Aspects and Functions, ISDN Network Interfaces. Recommendations I.310-I.470 (Geneva 1989).
- Volume III - Fascicle III.9: Integrated Digital Network (ISDN) / Internetwork Interfaces and Maintenance Principles. Recommendations I.500-I.605 (Geneva 1989).
- Volume VI - Fascicle VI.1: General Recommendations on Telephone Switching and Signalling / Functions and Information Flows for Services in the ISDN / Supplements. Recommendations Q.1-Q.118*bis* (Geneva 1989).

- Volume VI - Fascicle VI.7: Specifications of Signalling System No.7. Recommendations Q.700-Q.716 (Geneva 1989).
- Volume VI - Fascicle VI.8: Specifications of Signalling System No.7. Recommendations Q.721-Q.766 (Geneva 1989).
- Volume VI - Fascicle VI.9: Specifications of Signalling System No.7. Recommendations Q.771-Q.795 (Geneva 1989).
- Volume VI - Fascicle VI.10: Digital Subscriber Signalling System No.1 (DSS 1), Data Link Layer. Recommendations Q.920-Q.921 (Geneva 1989).
- Volume VI - Fascicle VI.11: Digital Subscriber Signalling System No.1 (DSS 1), Network Layer, User-Network Management. Recommendations Q.930-Q.940 (Geneva 1989).
- Volume VI - Fascicle VI.12: Public Land Mobile Network, Internetworking with ISDN and PSTN. Recommendations Q.1000-Q.1032 (Geneva 1989).
- Volume VII - Fascicle VII.3: Terminal Equipment and Protocols for Telematic Services. Recommendations T.0-T.63 (Geneva 1989).
- Volume VII - Fascicle VII.5: Terminal Equipment and Protocols for Telematic Services. Recommendations T.65-T.101, T.150-T.390 (Geneva 1989).
- Volume VII - Fascicle VII.6: Terminal Equipment and Protocols for Telematic Services. Recommendations T.400-T.418 (Geneva 1989).
- Volume VIII - Fascicle VIII.1: Data Communication over the Telephone Network. Series V Recommendations (Geneva 1989).
- Volume VIII - Fascicle VIII.2: Data Communication Networks: Services and Facilities, Interfaces. Recommendations X.1-X.32 (Geneva 1989). Two copies.
- Volume VIII - Fascicle VIII.3: Data Communication Networks: Transmission, Signalling and Switching, Network Aspects, Maintenance and Administrative Arrangements. Recommendations X.40-X.181 (Geneva 1989).
- Volume VIII - Fascicle VIII.4: Data Communication Networks: Open Systems Interconnection (OSI) Protocol Specifications, Model and Notation, Service Definition. Recommendations X.200-X.219 (Geneva 1989).
- Volume VIII - Fascicle VIII.5: Data Communication Networks: Open Systems Interconnection (OSI) Protocol Specifications, Conformance Testing. Recommendations X.220-X.290 (Geneva 1989). This is the formal specification of the ISO OSI 7-layer network model.
- Volume VIII - Fascicle VIII.6: Data Communication Networks: Internetworking between Networks, Mobile Data Transmission Systems, Internetwork Management. Recommendations X.370-X.370 (Geneva 1989).
- Volume VIII - Fascicle VIII.6: Data Communication Networks: Message Handling Systems. Recommendations X.400-X.420 (Geneva 1989).
- Volume VIII - Fascicle VIII.8: Data Communication Networks: Directory Recommendations X.500-X.521 (Geneva 1989).

**CCITT and ITU-T Telecommunications Standards Relating to Modems [Box #26]**

- CCITT Recommendation V.42bis: Data Communication Over the Telephone Network, Data Compression Procedures for Data Circuit Terminating Equipment (DCE) Using Error Correction Procedures (1990)
- CCITT Recommendation V.32bis: Data Communication Over the Telephone Network, A Duplex Modem Operating at Data Signalling Rates of up to 14 400 bit/s for use on the General General Switched Telephone Network and on Leased Telephone-Type Circuits (March 1991).
- International Telecommunications Union ITU-T V.42: Data Communication Over the Telephone Network, Error-Correcting Procedures for DCEs Using Asynchronous-to-Synchronous Conversion (March 1993).
- International Telecommunications Union ITU-T V.32: Data Communication Over the Telephone Network, A Family of 2-Wire, Duplex Modems Operating at Data Signalling Rates of up to 9600 bit/s for Use on the General Switched Telephone Network and on Leased Telephone-Type Circuits (March 1993).
- International Telecommunications Union ITU-T V.34: Data Communication Over the Telephone Network, Interfaces A Modem Operating at Data Signalling Rates of up to 28 800 bits/s for Use on the General Switched Telephone Network and on Leased Point-to-Point 2-wire Telephone-Type Circuits (September 1994).
- International Telecommunications Union ITU-T V.25ter Series V: Data Communication Over the Telephone Network, Interfaces and voiceband modems: Serial asynchronous automatic dialing and control (July 1997).

**Other Data Communications Standards and Collections [Box #27]**

- Digital Equipment Corporation, Intel, Xerox, *The Ethernet, A Local Area Network: Data Link Layer and Physical Layer Specifications* Version 1.0, September 30, 1980. The original first-edition Ethernet specification, the local-area networking method that took over the world and is still used today. Glossy cover. This is a historic publication.
- Digital Equipment Corporation, Intel, Xerox, *The Ethernet, A Local Area Network: Data Link Layer and Physical Layer Specifications* Version 1.0, September 30, 1980. Another copy but with Digital Part Number AA-K759A-TK, 5-hole-punched, and with plain paper cover.
- Folts, Harold C., ed., *McGraw-Hill's Compilation of Data Communications Standards, Edition III* (1986), in 3 volumes. Compilation of ANSI, EIA, US Federal, CCITT, ISO, and ECMA standards then current. Hardbound, 8¾x11½", very expensive.
- The OMNICOM Index of Standards for Distributed Information and Telecommunications Systems (1987). Abstracts of thousands of standards, information about national and international standards organizations. Paperbound, 8½x11".
- Conard, J.W., *Higher Level Protocols*, Carnegie Press (1985). Paper, 8½x11".
- Conard, J.W., *X.25, X.75 and Related Packet Network Protocols*, Carnegie Technology (1986). Paper, 8½x11".

- Conard, James W., *Standards & Protocols for Communications Networks*, Carnegie Press (1985). Paperbound, 8½x11".

### **Reference Cards and Pocket Guides for Terminals [Box 28]**

For terminals that were in wide use at Columbia...

- Concept-100 Reference Card
- DEC VT100 Terminal Setup
- DEC VT125 Programming Reference Card
- DEC VT220 Programmer Pocket Guide
- DEC VT240 Series Programmer Pocket Guide
- DEC VT330/VT340 Programmer Pocket Guide
- Hewlett-Packard HP-2621B Interactive Terminal
- IBM 3164 ASCII Color Display Station Operator Reference and Problem Solving Guid
- Tektronix 4010 Graphics Terminal Plot-10 Easy Graphics Reference Card
- *Tektronix 4200 Series Computer Display Terminals Reference Guide* (1988)
- Wyse-50 Display Terminal Quick-Reference Guide (1983)

### **Terminal Manuals and Books [Boxes #28 and 29]**

For terminals that were in wide use at Columbia and/or that are emulated by MS-DOS Kermit, Macintosh Kermit, or Kermit 95 for Windows. These are original published manuals unless otherwise indicated. Of these Jeff Altman, Kermit Project, 1993-2003, says:

One of the things I enjoyed most when working on Kermit was the ability to travel the world and meet users wherever I went. Frank, and to a lesser extent myself, acquired a large number of manuals, terminals, software, and computers and more that by the time they came into our possession were already facing extinction.

After my departure from Columbia University in 2003 Frank was forced to scrap a large number of items because my office space was no longer available for storage. Some of the equipment which was destroyed in that purging were military terminals whose manuals were labeled top secret. They came into my possession on a drive from Charlotte NC to New York through Virginia where a concerned soul literally met me behind an abandoned warehouse and the machines and manuals fell off the back of a truck into my back seat.

I am particularly concerned about the loss of the early and rare terminals because in my time working with them I found the manuals to be frequently lacking in accuracy. The only way to know how the actual terminal sequence parser would behave was to write test sequences and pass them through the physical machine. The manuals were nice to have but without the terminal, an accurate emulator could never be developed.

- Sharp, Duane E., *Handbook of Interactive Computer Terminals*, Reston Publishing Company (1977). An explanation of how terminals work and a survey of terminals on the market in 1977.
- Strang, John, Linda Mui, and Tim O'Reilly, *termcap & terminfo*, O'Reilly & Associates (1988). How the UNIX terminal database works and how to use it.
- *ADDS Consul 500 Series Users Manual* (1978). Photocopy.
- *Ann Arbor XL Series User Guide* (1984). This was the first terminal with a "tall" display (the Genie had 30 lines; the Ambassador, sixty). Everybody wanted one but they were very expensive.
- *Bolt Beranek and Newman (BBN) BitGraph Advanced Graphics Terminal: User's Guide and Operating Instructions Version 2.0* (1982). Photocopy.
- *Data General: Programming the Display Terminal: Models D217, D413, and D463* (1991). The Data General DASHER text/graphics terminals, received (along with a DG minicomputer) in an equipment grant to support Kermit software development for Data General users.
- Data General DASHER terminal keyboard labels for CEO and SED.
- *Datamedia Elite 3025 Video Terminal Operator's Handbook* (1978). We put some of these in the dorms because they were made of metal, built like tanks.
- *Datamedia Elite 1520APL Technical Manual* (1977).
- *Datamedia Elite 3052 Video Terminal Operator's Handbook* (1978).
- DECscope sales brochure, undated but probably from 1975 or 76, featuring the VT50 and VT52, the latter being the first DEC video terminal with lowercase as well as uppercase letters, and an 80-column screen, big enough to show a "full-card FORTRAN or COBOL image" on each of the DECscope's twelve (VT50) or twenty-four (VT52) lines. And it eliminates the teletypewriter's annoying noise!
- *DECscope User's Manual* (1975). VT52, VT50H, VT50. Photocopy.
- *DEC LA36/LA35 User Manual* (1976). Hardcopy terminal, pinfeed 132-column fanfold paper.
- *DEC LS120 DECwriter III Operator Manual* (1977). Ditto.
- *DEC LA120 User Guide* (1979). Ditto.
- *DEC VT100 User Guide*, 3rd Edition (1981). Perhaps the most influential of all video terminals, till widely emulated to this day.
- *DEC GIGI VK100 Terminal Installation and Owner's Manual*, 1st Ed. (1981). The GIGI was DEC's attempt to create a new graphics standard based on its ReGIS graphics language. The GIGI could draw pictures and animations specified by BASIC programs. The GIGI itself looked like a fat keyboard; the monitor had to be ordered from a third party (Barco). It could also do slide shows. DEC gave a big GIGI presentation at CU in Harkness theater around 1980 or 81. The GIGI kind of fizzled out but later model DEC terminals supported host-generated ReGIS graphics.
- *DEC GIGI/ReGIS Handbook*, Preliminary Edition (Feb 1981).
- *DEC GIGI Graphics Editor Manual*, 1st Printing (1981).
- *DEC GIGI BASIC Manual*, 1st Printing (1981). Two copies.
- *DEC GIGI Character Set Editor Manual*, 1st Printing (1981).
- *DEC GIGI Slide Projection System Manual*, 1st Printing (1981).

- *DEC VT125 User Guide* (1981).
- *DEC VT131 Video Terminal User Guide* (1981).
- *DEC VT102 Video Terminal User Guide* (1982).
- *DECwriter IV Graphic Printer User's Guide* (1981).
- *DEC Letterprinter 100 Operator Guide* (1983)
- *DEC Letterprinter 100 Programmer Reference Manual* (1983)
- *DEC VT220 Installation Guide*, 2nd Edition (1984).
- *DEC VT220 Owner's Manual*, 3rd Edition (1984).
- *DEC VT240 Series Installation Guide*, 2nd Edition (1984).
- *DEC VT240 Series Owner's Manual*, 3rd Edition (1984).
- *DEC VT240 Series Programmer Reference Manual*, 2nd Edition (1984).
- *DEC VT320/VT330/VT340 Video Terminals*, sales brochure (1987).
- *DEC: Installing and Using the VT320 Video Terminal*, 1st ed. (1987).
- *DEC: Installing and Using the VT330/340 Video Terminal*, 2nd ed. (1988).
- *DEC VT330/VT340 Programmer Reference Manual, Volume 1: Text Programming*, 2nd Ed. (1988).
- *DEC VT330/VT340 Programmer Reference Manual, Volume 2: Graphics Programming*, 2nd Ed. (1988). Two copies, one still shrinkwrapped, sort of.
- *DEC VT420: Installing and Using the VT420 Video Terminal (North American Model)*, 2nd Ed. (1990).
- *DEC LK450 Keyboard Engineering Specification* (6 August 1986).
- *DEC LK450 Keyboard Product Specification*, Confidential and Secret Information (17 Jan 1991).
- *Hazeltine 2000 Operating Manual*, March 1972, Revised January 1975. Photocopy. As far as I know, this was the first video terminal at Columbia University. When I came to work at Watson Lab in 1974, there was one in each room, so that 2 or 3 people shared each terminal.
- *Heathkit Manual for the Video Terminal Model H19* (1979).
- *Hewlett Packard 2621A/P National Terminal Owner's Manual* (1980). Columbia had large numbers of 2621-series terminals in the public terminal rooms in Mudd, Carman, and the Computer Center beginning in 1979.
- *Hewlett Packard 2621B Interactive Terminal*, Revision 1 (1980).
- *Hewlett Packard 2648A Graphics Terminal Reference Manual* (1977).
- *Honeywell VIP7809 Terminal Product Manual*, Department of the Navy (April 1983).
- *Honeywell VIP7809 Display Terminal Reference Manual*, Department of the Navy (April 1983).
- *Honeywell VIP7800 Family Display Terminals User's Reference Manual* (1983).
- Human Designed Systems, *Concept Reference Manual* (1978 plus 1979 addenda). This was the preferred terminal for use with the DECSYSTEM-20s at Columbia for reasons I can explain if asked. Well, briefly, because it had very powerful host-driven editing and screen-formatting features, enabling advanced editing features at slow communication speeds. The Systems staff at Columbia added Concept support to EMACS. If I recall correctly, this included the first split-screen editing (two files, one in each sub-window).



- Human Designed Systems, *Concept Schematic Diagrams* (1980).
- Human Designed Systems, *Concept-APL Reference Manual DRAFT* (1978). We were a big customer of the Concept-100 terminal. However, the APL language was required by some number of Columbia courses, and APL uses a special character set. This terminal was pretty much custom-built for us and we wound up buying a truckload of them.
- Human Designed Systems: various technical updates, 1979-80.
- Human Designed Systems, *Concept 108 Users Manual* (1981).
- *Human Designed Systems HDS3200 Terminal Series Owner's Manual* (1988).
- IBM 3101 sales brochure (1979).
- *IBM 3151 ASCII Display Station Configuration and Software Reference Guide*, 1st ed. (1988). IBM 3100-series terminals were used to some extent by Columbia administrative computing departments, presumably in areas that could not be reached by the SNA 3270 terminal network.
- *IBM 3151 ASCII Display Station: Guide to Operations*, 2nd ed. (1989).
- *IBM 3151 ASCII Display Station Models 11, 31, and 41: Guide to Operations*, 3rd ed. (1990).
- *IBM 3161/3163 ASCII Display Station Description*, 1st ed. (1985). With several supplements. In a 3-ring binder.
- *IBM 3164 ASCII Color Display Station Description*, 1st ed. (1986).
- *IBM 3270 Information Display System Component Description*, 11th Ed. (1980). The famous "green tube", practically ubiquitous in CU administrative offices through the 1990s.
- *IBM 3270 Information Display System Introduction*, 19th Ed. (1984).
- *IBM 3270 Information Display System Character Set Reference* (1986).
- *Infoton Vistar/GT Technical User's Manual* (1973).
- *Infoton I-100 User's Manual* (1973). Draft, photocopy.
- *Perkin-Elmer Model 1100 User's Manual* (1977). At \$500, the Perkin-Elmer "Fox" was the first affordable video terminal and we put about 15 of them in the first public terminal room in 272A Engineering Terrace. It was rather large.
- *Perkin-Elmer Model 550 User's Manual* (1978). This was a "miniature" version of the Fox.
- *Selinar Graphics 200 Terminal* (1982).
- *Siemens-Nixdorf Bildschirmereinheit 97801-40x / 97801-40x Terminal: Betriebsanleitung / Operating Manual* (1990). German and English. An extremely powerful and complex terminal that supported a multiplicity of character sets and writing systems, including Cyrillic. With these manuals (and a 97801 terminal) we equipped Kermit 95 with 97801 terminal emulation.
- *Siemens-Nixdorf Bildschirmereinheit 97801-5xx Schnittstellen: Benutzerhandbuch* (1991). In German.
- *Siemens-Nixdorf 97801-5xx Terminal Interfaces User Guide* (1991). English.
- *Siemens-Nixdorf Datensichtstationen 97801-512/-512/-512P 97801-514/-514P/-514 Betriebsanleitung / Operating Manual* (1992). In German and English.

- *Siemens-Nixdorf EM97801 3.0 (MS-DOS, Windows) 97801-Emulation Unter Windows* (1993). German.
- *Siemens-Nixdorf TC20-V1xx: Installation, Inbetriebnahme und Wartung / Installation, Operation and Maintenance* (1995). In German and English.
- *Stratus V102 Terminal Programmer's Guide* (1986).
- *Tektronix 4010 Computer Display Terminal* (1972). This was the most influential of all graphics terminals. Its graphics language is supported to this day by many other graphics terminals and emulators, and by host-based graphics software such as SASGRAPH. Columbia had a Tektronix 4010 in its Self-Service Input/Output Area in the 1970s and 80s, and in Watson Lab. MS-DOS Kermit included Tek4010 emulation.
- *Tektronix 4014 and 4014-1 Computer Display Terminal User's Manual* (1974, Revised 1982). This terminal was in the Seismology Department.
- *Tektronix 4205/4207 Computer Display Terminals Operators Manual* (1988).
- *Tektronix 4957 Series Graphics Tablet Users Manual* (1986)
- *TeleVideo 922 Video Display Terminal Operator's Manual* (1984).
- *TeleVideo 965 Operator's Manual* (1988).
- *Zenith Data Systems Video Terminal Model Z-19-CN Operation Manual* (1981).
- *Wyse WY-50 User's Guide* (1983). Photocopy.
- *Wyse WY-60 User's Guide* (1989).
- *Wyse WY-60 Programmer's Guide* (1987).
- *Wyse WY-370 Programmer's Guide* (1990).
- *Wyse WY-35/ES Programmer's Guide* (1995).

### **Modem Manuals [Box #30]**

- *3Com Courier V. Everything Getting Started Guide* (1997).
- *ACER Modem Command Description* (undated)
- *ASKEY V.90 External Modem AT Command Set* (undated, late 1990s)
- *AT&T Paradyne DataPort Express Modem User's Guide* (1995)
- *BOCAMODEM V.34 Data Fax Modem* (undated).
- *Conexant Commands for Host-Processed and Host-Controlled Modems: Reference Manual* (1999).
- *Conexant AT Commands for SmartSCM, SmartACF, SmartACFL, and SC56D Modems: Reference Manual* (2001).
- *Diamond Supra EXPRESS V.90 Manual* (undated, late 1990s).
- *ELSA Microlink 56k AT-Befehle* (1998). In German.
- *Hayes Smartmodem 1200 Hardware Reference Manual* (1983), spiral bound.
- *Hayes Smartmodem 1200 User's Guide* (1984), with Reference Card.
- *Hayes CCITT V.25bis Command Set Reference* (1992).
- *Hayes Smartmodem 2400 Getting Started* (1989), pamphlet.
- *Hayes Smartmodem 2400 User's Guide* (1986), spiral bound.
- *Hayes Smartmodem 2400 User's Guide* (1988).

- *Hayes V-series ULTRA Smartmodem ULTRA-24 with Express 96, ULTRA 96, ULTRA 144* (1992), paperbound.
- *Intel Command Guide for Intel High-Speed Data Modems* (1991).
- *LASAT Internet 56.000 Modem Manual* (1998).
- Lucent Technologies / Bell Labs *VENUS AT Command Reference Manual* (1997, 2000)
- Microcom DeskPorte 28.8P Fax/Data Modem User's Guide (undated)
- Motorola UDS V.3229 Modem Installation and Operation (1991).
- Motorola 28800 BPS Fax Modem AT Commands (undated)
- Omnitech Telephone Coupler Models 401 A/BC 701 R Technical Specification, Instruction and Maintenance Manual (1977). For use Teletype Model 33.
- Powersurf Data/Fax/Voice Modem *AT Command Reference Manual* (undated)
- Practical Peripherals *Practical Modem 14400FXMT Operating Manual* (1992).
- Racal-Milgo Inc. *RMD-3221 Modem User's Guide* (April 1989).
- Racal-Milgo Inc. *MDS-II Chassis Controller - DCP Interface Specification* Version 5.0 (April 23, 1987). This and the following: Documentation for Columbia's modem-pool chassis, late 1980s - mid 1990s, supporting about 800 simultaneous inbound data calls.
- Racal-Milgo Inc. *MDS-II Interprocessor Interface Specification* Version 7.0 (December 14, 1990).
- Racal-Vadic VA4492E Modem User's Guide (September 1986).
- Racal-Vadic VA9000 System Controller User's Guide (July 1987).
- Racal-Milgo Inc. *RMD-3264 Dual Modem User's Guide* (Feb 1991).
- Rockwell *AT Commands for RCVDL56ACF, RCVDL56ACFL/SP, RC56D/RC336D, RC56LD/RC336LD Modems Reference Manual (Preliminary)* (1998)
- Siemens *Manual Reference Modem Commands for Siemens Mobile Phone S35i, C35i, M35i*. Undated, in English.
- Shark Basking Combo Sound Card / 56K Modem (undated).
- Smartlink 5634TS User's Manual (undated, early 1990s).
- Telebit *Models RA12E and RA12C Packetized Ensemble Modem: Firmware Version R2.0-020, Commands and Registers Reference Manual* (1985, 1985). With reference card.
- Telebit Trailblazer User's Manual (1985). This is the first modem to include a "Kermit spoof"; that is, the modem itself executed Kermit protocol between itself and the computer and converted to its own PEP protocol between the modems (this was done in cooperation with the Kermit Project). This modem, which was one of the first to routinely exceed 9600 bps, formed the connection backbone of CSnet.
- Telebit Trailblazer Commands and Registers Reference Manual (1987).
- Telebit T3000 *Fast Start Guide* (1991)
- Telebit T3000 *Facsimile and V.25bis Addendum* (1992)
- Telebit T3000 *Reference Manual* (1991)
- TurboModem V.Fast Installation Guide (undated).
- UDS 212LP Modem Manual, undated, mid-1980s.
- US Robotics *Courier PCMCIA User's Guide* (1992), paperbound.

- US Robotics *Sportster modems Quick Start* (1994).
- US Robotics *Sportster Winmodem 28.8 and 14.4 Faxmodems for Windows: User's Guide* (1996).
- US Robotics *Courier High Speed Modems V.34 User's Manual* (1994)
- Wisecom 56K Modem Riser Card WS-5614DML (2001).
- Zoltrix *AT Command Set Summary for PCTel chipset* (1998).
- Zoltrix *AT Command Manual for Zoltrix Model FMHCF56i/FMVSP56SHCF/FM56KTOMCAT* (1998).