

Columbia University Center for Computing Activities

KERMIT DISTRIBUTION MANUAL

Chris Gianone, Frank da Cruz

25 April 1988

1. Overview

This manual describes procedures that are always changing. If you have questions or comments, mark up your copy of this manual and give it to Chris or Frank, so we can make it clearer or more complete. Thanks!

Kermit is a computer file transfer protocol developed at Columbia University, and a large collection of computer programs to implement this protocol, and to perform other data communication functions. This collection of software is kept at Columbia and distributed all over the world.

Kermit has been distributed by Columbia since 1981. At first we asked for no money, just a tape and a return mailer. Starting in May 1983, we discontinued this practice and asked for a distribution fee of \$100 for a tape containing all the available Kermit programs. In June 85, the collection could no longer fit on a single tape, so we had to make two tapes, A and B. By November 86, we needed a third, tape C. And in August 1987, we expanded to five tapes.

Kermit Distribution is part of the Systems Group at the Columbia University Center for Computing Activities (CUCCA). It consists of an Administrator (Christine Gianone), a full time production coordinator (formerly Bob Tschudi, position currently vacant), and a staff of part time students.

Chris is the manager of Kermit Distribution, with responsibility for hiring and supervision of the production coordinator and part-timers, design of distribution procedures, arbitration of conflicts among the staff, or between the staff and customers, and all related issues. Frank is just an advisor, not really involved in the day-to-day business.

Kermit Distribution work consists of:

1. Answering the telephone.
2. Production, packing, and shipping of Kermit tapes, diskettes, and documentation.
3. Keeping and filing records of the orders on paper, and in a computer database.
4. Tracking of orders that were not delivered.
5. Occasional special tasks, like mass mailing of the Kermit Newsletter.

The database is in a single, very large file, `kermit.who`, called the "who file" on the CUCCA VAX-11/750. It is accessed using the text editor EMACS, for both order entry and order lookup. (Some day, this file might be converted to a real database, but that's a BIG JOB.)

Since Kermit is so popular, there are many phone calls. It is important that people be present from 9 to 5 every work day to answer them. The calls fall into several categories:

1. Requests for information (how to order).
2. Customer queries about the status of their orders.
3. Technical questions.

Kermit distribution workers must be able to handle the first two. Technical questions can be referred to Chris or Frank.

2. Facts

The Kermit file transfer protocol is named after Kermit the Frog, star of the television series THE MUPPET SHOW. The name Kermit is used by permission of Henson Associates, Inc, New York, which holds rights to it as a registered trademark.

Our address:

Kermit Distribution
Columbia University Center for Computing Activities
612 West 115th Street
New York, NY 10025

Our "Zip+4" is 10025-7721.

Phone for order information and inquiries: 212-280-3703.

Phone for technical questions: 212-280-5126.

Kermit Distribution does not have a FAX machine or a Telex number.

Kermit distribution does not accept payment by credit card or bank transfer. We're not business, we're a university.

Columbia University Facts:

Minority-owned business?	No
Woman-owned business?	No
Small business?	No (We're not a business, we're an educational institution.)
Large business?	No (Ditto)
Nonprofit organization?	Yes
Federal ID Number:	13-5598093
Tax Exempt Number:	127902
Annual budget:	About \$600,000,000
Students:	About 18,500
Faculty members:	About 1760
Employees:	About 10,000
Founded:	1754

3. Answering the Phone

The telephone rings. If you do not pick it up by three rings, the call is automatically transferred to x5483, which is the front desk (Tommy Calathes). He will usually try to call x3703 again, then he will try x5126. If that doesn't work, he may (or may not) take a message.

Answer the phone by identifying Kermit, such as, "Good Morning, Kermit Distribution" (or good afternoon, etc). The calls are usually like these:

1. **How can I find out more about Kermit?** -- tell the caller that we we will send them the *Kermit Information Packet*, which consists of a brochure, the current list of available versions, the Commercial Policy Statement, an order form, and a list of alternate sources of Kermit. The list of versions shows which tape each version is on.
2. **Can I order over the phone?** -- No, we don't accept phone orders or credit card numbers. We're a university, not a business.

3. **I have heard/read about Kermit and I want to buy it right now.** -- tell the caller that they can only order by mail. Offer to send them the info packet. If they insist that they can't wait, encourage them again to let us send the info packet. The order form is foolproof, it forces the customer to check which tapes or disks, in which format. If they're in such a big hurry, they can give us their Fedex account number, and we can send them the info packet via overnight letter.
4. **But I absolutely have to order it today!** -- If you try to give them ordering information over the phone, and then they order the wrong thing, they'll blame us and ask for a replacement. This happens over and over again. Therefore, if they absolutely insist on receiving information over the phone (like which tape to order, how much it costs, etc), then tell them that we will not assume any responsibility if they order the wrong item, or the wrong format, and we will not replace any item shipped as ordered. **DO NOT OFFER ADVICE ABOUT TAPE FORMATS UNLESS YOU ARE ABSOLUTELY SURE OF WHAT YOU'RE SAYING.**
5. **Is there a Kermit program for (machine) with (operating system)?** -- Look it up in KER:AAVERS.HLP (version list) or KER:AAVOPS.HLP (version list in order of operating system). Look at BOTH the machine AND the operating system. For instance, if someone is running Unix on a Sperry computer, don't tell them to order Tape D, because Sperry Kermit is listed there; Unix Kermit is on Tape B.
6. **Where's the tape that I ordered?** -- Also known as a WMT (Where's My Tape?). Search in the who-file, by name, by company, by zip code, and/or purchase order number. If you find the order, check the bottom line for the date it was packed. Tell the caller to allow two weeks from the date. If there is an asterisk (*), look in the pile on the shipping desk to see where it sits in the queue. If you can't find the order in the who-file, then try to figure out what happened.
 - a. Did the caller send a check with the order? What did s/he order? How much did s/he send? Maybe it was bounced. (*QUESTION: Do we keep a record of bounced orders? If not, how can we tell callers their order was bounced, and for what reason? Maybe we should keep a bounce file.*)
 - b. Is it a domestic shipment that went out more than a week or two ago? Call the shipper (UPS or Federal) and get them to trace it, take down the caller's name and phone, and get back to them when you find out what happened. Often, the problem is that the mailing label didn't include a P.O. number when it should have, or it included a P.O. Box number when it shouldn't have.
 - c. Is it a foreign shipment? Maybe the box has been sitting in the mail room for 6 weeks... Go down and check. If this is the case, notify Chris.
7. **I just received my Kermit order but you sent the wrong material** -- look up the order to verify the customer's claim. If they're asking for something they didn't order, tell them (politely) we don't do exchanges -- it says so on the order form. If we really sent the wrong thing, then ask them to send back the incorrect material with a note, and we'll replace it.
8. **I received your tape, but it's defective** -- Look up the order, check the shipping date. If it's more than 3 months ago, tell them to order again. If they want a different format, tell them to order again. If it's the right format, and the order was recent, tell them to send the tape (or disk) back for replacement, with a note stating what was wrong with it.
9. **Can I come by to pick up the software?** -- Generally, we try to discourage people from coming here, since the building has a lot of valuable equipment, and Kermit buyers have been known to wander around the building, and because customer visits tend to slow down production. Again, we're not a business. If you do make an arrangement for someone to pick up an order, **MAKE SURE YOU ARE HERE AT THE APPOINTED TIME**, and also (in case you get sick or something) that you have told Chris about it, and she knows where

the order is, and what the customer is supposed to pay.

10. **I don't have access to a tape drive; how can I get Kermit onto my system?** -- We have Kermit on diskette for certain systems: IBM PC, DEC Rainbow, Apple Macintosh, MicroVAX, C-Kermit & IBM PC source on IBM PC diskette, etc. For other systems, see if you can get it from someone else who has a system like yours. Look on the volunteer diskette list `KER:AADISK.HLP`. If it is not on the list, tell ask the caller to try to get it from a user group. If they're not satisfied with these answers, pass them along to Chris or Frank.
11. **I'm writing Kermit for (system xxx) and...** -- Pass the call along to Chris or Frank, who will look up the system in the `KER:AAWAIT.HLP` file and let the caller know who else, if anyone, is working on the same thing, and perhaps also enter the caller into this file.
12. **How dare you charge a \$100.00 billing fee!** -- We're a university, not a business. We try to provide the Kermit software to as many people as we can, as quickly as we can, as a public service. But billing, and tracking unpaid bills, uses up a lot of time that would be better spent in production and shipping of Kermit orders. Therefore we encourage prepayment.
13. **Please let me talk with your supervisor!** -- Don't resist, put them through to Chris or Frank.

Finally, there will be many callers requesting technical or semitechnical assistance. First make sure they not just after ordering information. If they are, take their name & address and send an info packet. If not, forward the call to Chris or Frank. **NEVER GIVE OUT CHRIS'S OR FRANK'S PRIVATE PHONE NUMBERS!**

If the caller has received a tape, but has problems reading it, forward them to Frank or Chris, who can determine whether it's a bad tape, or they're just not following the right procedure to read it. If it's a bad tape, we'll replace it.

4. Opening Kermit Mail

Mail comes in once or twice a day (or more, or less), depending on the delivery schedules. Usually Frank or Chris opens the mail and brings it back to the Kermit factory.

When opening mail, don't throw anything away, including the envelope. Sometimes the only good return address is on the envelope.

There are several types of mail:

1. **Requests for information, lists of Kermit versions, ordering information.** -- Send them the *Kermit Information Packet*, which consists of:
 - a. The Kermit flyer (a 4-page printed brochure, with order form)
 - b. The list of versions (`AAVSYS.HLP`)
 - c. The Commercial Policy Statement (`AAXCOM.DOC`)
 - d. The list of alternate sources of Kermit (`AADISK.HLP`)

Write the name and address, legibly, on an envelope. Be sure to write the country name for foreign requests. Also, for any letter whose destination is outside USA, write or stamp "Air Mail" on the envelope.

2. **Letters requesting permission to include Kermit in a commercial product** -- Give these to Chris.

3. **Letters or packages containing or announcing new Kermit versions** -- Give to Chris.
4. **Letters requesting Kermit that are accompanied by a check or company purchase order.** -- These are potential orders. If the amount on the check corresponds to the current fee schedule, *and* the "Pay to" line has "Columbia University" in it somewhere, then the order should be processed. Check to see if there is a *complete* mailing address. If there are inconsistencies or if the tape format is unclear, then check with Chris or Frank. If they say the order can't be filled, the order and check should be returned to the customer, accompanied by the "Incomplete Order Notification," or "bounce notice". The orders that are correct are logged into the database.
5. **Returns** -- Tapes or disks that were returned because of production, addressing, or shipping errors. Look up the order, make sure it's a valid return. Consult Chris if there's any doubt.
6. **Letters asking about status of order** -- Check it, take any necessary corrective action.
7. **A blank tape/diskette, accompanied by a written request for Kermit.** -- When Kermit was first developed, the programmers here told people to send a blank tape, and they'd put Kermit on it. We haven't done it this way since 1983. Return these orders, along with information packets.

5. Entering Orders Into the Who File

The who-file is on the CUCCA VAX 750, stored as `~bob/kermit.who`. To access the who-file, do this:

```
cd ~bob
ed kermit.who
```

You will then have the who-file in EMACS, where you can edit it (add or correct entries), or look up entries using the search command (Control-S).

The format of who-file entries is rather rigid for two reasons:

1. A variety of reporting and mailing-label programs have to read it, and only certain formats are understood by these programs.
2. The US Post Office delivers mail best when it is addressed in certain ways.

Each who-file entry must have a blank line above and below it. It starts with the customer's mailing address, then one or more order entry lines, and then possibly some comments. Example:

```
Intertrade Scientific GmbH
Postfach 60 04 62
Landsbergerstrasse 439
8000 Muenchen 60
> WEST GERMANY
[PC,FDC,BY, 22 May 87, #5917: ]($65.)
```

The format is explained in the following sections.

More than one person can have the who-file loaded into EMACS at once, but only one person is allowed to make changes. The first person to make a change gets exclusive write-access to the file. Anyone else who attempts to make a change will get a warning message. This prevents people from destroying each other's work.

New entries are added at the bottom, just above the last line. Before making an entry, go to the bottom (ESC->), search backwards (Ctrl-R) to see if there are any previous orders from the same person. If so just add the new order to the old entry (this avoids duplication when we do mass mailings). Otherwise, make a new order at the bottom.

If you want to look things up in the who-file, and do not expect to make any changes, use Ctrl-X Ctrl-R to load the file in read-only mode.

Each morning at 3:00am, a "batch job" will run to produce the "who.c" listing of the day's backlog, errors, etc. The file will be printed on the Imagen, and will also be on line on the VAX in ~bob/who.c.

Each morning at 5:00am, the who-file is automatically transferred to the DEC-20 B (CU20B) for backup. The CU20B copy is called KD:WHO.BACKUP.

5.1. The Mailing Address

The address has two parts. First is the "free format" part, which consists of the person's and/or company's name, possibly a purchase order number, street address, post-office box, etc. Second is the "location line", which for USA addresses contains the city, state, and zip code, and for foreign addresses contains the name of the country and possibly also a postal code.

There must be at least 3 lines in the address. If the address only has two lines, then add a new top line, like "Computer Department".

The address should be no more than 7 lines long, and no line should be longer than 33 characters, so that it can fit on our mailing labels.

Any text after the location line is ignored by the label-printing programs. If a person's name is given, put it on the top line. DON'T put Attn:Joe Smith after the city, state zip line.

USA addresses should be of the form:

<i>name</i>	(if any)
PO#xxxxxx	(if any; if there was one, be sure to include it.)
<i>company, department</i>	(if any)
<i>street address</i>	(or Post Office Box number)
<i>city, XX zzzzz (or zzzzz-zzzz)</i>	(all on one line, just like this)

XX is the official 2-letter state code (they're posted on the wall). Don't include periods.

zzzzz is the zip code, and zzzzz-zzzz is the zip+4 (use it if you have it).

Comma and space after city, space but no comma between state and zip. Examples:

```
New York, NY 10025
Chicago, IL 12345-9876
Washington, DC 20020
Mayaguez, PR 00708
```

For foreign shipments:

```
> COUNTRY
```

Put the name of country on a line by itself, all in uppercase, preceded by "> " (a right angle bracket FOLLOWED BY ONE SPACE). If there's a postal code, it can go on the City (or City, State) line, according to the addressing conventions of that country. Examples:

```
9700 AD Groningen          Dorset DT4 9TY          D-5000 Koeln 1
> NETHERLANDS              > ENGLAND                > WEST GERMANY
```

Use consistent names for countries, as shown in Table 1.

For parts of the U.K. not in England proper, do like this:

```
> WALES, UNITED KINGDOM CF37 1DL
> SCOTLAND, UNITED KINGDOM EH30 9TG
```

AUSTRIA	(not OESTERREICH, the Austrians' own name for it)
BELGIUM	(not BELGIE or BELGIQUE)
CZECHOSLOVAKIA	(spelled like this...)
DENMARK	(not DANMARK, which is how they spell it.)
ENGLAND	(not UNITED KINGDOM, BRITAIN, GREAT BRITAIN, etc)
NETHERLANDS	(not THE NETHERLANDS, HOLLAND, NEDERLAND)
NORTHERN IRELAND	(not IRELAND or ULSTER)
PEOPLES REPUBLIC OF CHINA	(not CHINA or MAINLAND CHINA)
REPUBLIC OF CHINA	(not TAIWAN, CHINA, ROC, or FORMOSA)
REPUBLIC OF IRELAND	(not IRELAND or EIRE)
ROMANIA	(not ROUMANIA or RUMANIA)
SWITZERLAND	(not SUISSE, SCHWEIZ, etc)
THAILAND	(not SIAM)
USSR	(not RUSSIA, UNION OF SOVIET SOCIALIST REPUBLICS)
WEST GERMANY	(not GERMANY or FEDERAL REPUBLIC OF GERMANY)
YUGOSLAVIA	(not JUGOSLAVIA)

Table 1: Names of Some Countries

If you're not sure what the country should be, ask Chris or Frank, or look it up in an atlas or dictionary. And don't fill any orders from South Africa (if for no other reason than because it's against Columbia policy).

The following sections describe peculiarities of specific countries.

5.1.1. Canada

Canada has provinces, and a complete Canadian address includes the city, province, and postal code as well as the country "> CANADA". Canadian provinces have 2-letter codes, just like US states, as shown in Table 2.

Canadian postal codes look like this: LDL DLD (L is letter, D is digit), like "M5S 1A1". Sample Canadian city, province, postal codes:

Toronto, ON	Montreal, PQ
> CANADA M5S 1A1	> CANADA H3C 3Z8
Saskatoon, SK	Calgary, AB
> CANADA S7N 0W0	> CANADA T3E 6K6

Note, in this case the postal code goes with the country, rather than the city and province. This allows us to sort Canadian mailings in postal code order.

5.1.2. Australia

Australia also has states. A complete Australian address includes city, state, and postal code. Sometimes this is confusing, since one of the states is called "Western Australia" (which is not a country). Table 3 shows the official Australian state abbreviations.

Australian postal codes are 4 digits. Sample Australian addresses:

AB	Alberta
BC	British Columbia
LB	Labrador
MB	Manitoba
NB	New Brunswick
NF	Newfoundland
NS	Nova Scotia
NT	Northwest Territory
ON	Ontario
PE	Prince Edward Island
PQ	Quebec
SK	Saskatchewan
YT	Yukon Territory

Table 2: Canadian Province Abbreviations

ACT	Australian Capital Territory
NSW	New South Wales
NT	Northern Territory
QLD	Queensland
SA	South Australia
TAS	Tasmania
VIC	Victoria
WA	Western Australia

Table 3: Australian State Abbreviations

Amidale, NSW 2351	Parkville, VIC 3052
> AUSTRALIA	> AUSTRALIA
St. Lucia, QLD 4067	Adelaide, SA 5001
> AUSTRALIA	> AUSTRALIA
Nedlands, WA 6009	Canberra, ACT 2600
> AUSTRALIA	> AUSTRALIA

(And don't get Australia and Austria mixed up).

5.1.3. Germany

West Germany is also known as the Federal Republic of Germany, Deutschland, or Bundesrepublik Deutschland. We use "WEST GERMANY" in our order entries.

We've never had an order from East Germany yet, but it is called the German Democratic Republic (GDR), or Deutsche Demokratische Republik (DDR). Use "EAST GERMANY" in order entries.

German addresses can contain funny characters. If you see a vowel (a, o, or u) with 2 dots over it - which you can't type on an ASCII keyboard - just put an "e" after it: Muenchen, Duesseldorf, etc.

If you see what looks like a capital B (or a Greek Beta) in the middle of a word, it's really a double "s". "StraBe" is really "Strasse" (street).

German companies generally have "GmbH" or "AG" at the end. These are abbreviations for the equivalents of "Inc." or "Corp.". Notice the capitalization of "GmbH" (Gesellschaft mit beschaeftiger Handlung).

West German cities are preceded by a postal code like D-xxxx (4 digits), and may be followed by a numeric zone code.

Example of a German who-file entry:

```
Boehringer Mannheim GmbH
Sandhoffer Strasse 116
D-6800 Mannheim 31
> WEST GERMANY
[OSA,OSB,UG, 7 Apr 87, #5535: ]($235.)
```

5.1.4. Austria

...is like Germany, but a separate country. Don't mix it up with Australia. Austrians call their country Oesterreich. The major city is Wien (which we call Vienna). Postal codes look like A-xxxx (four digits).

5.1.5. Switzerland

...is partly like Germany, but also has French, Italian, and Swiss speaking parts. It's also called SCHWEIZ, SUISSE, and CONFOEDERATIO HELVETIA (CH). Postal codes look like CH-xxxx (4 digits).

5.2. Order Entry Lines

The order entry line looks like this:

```
[what, date, number](amount)
```

for example

```
[ANSIA, 14 Dec 87, #7654]($100.)
```

or

```
[UG, PM, BY, FDC, *, #7655]($50.)
```

Here's an explanation of the fields of the order entry line:

1. *what* is the item, or list of items, ordered. Here are the codes, please use them as shown. Don't abbreviate them, don't make up new codes. Don't write "ANSIA,B,C", write "ANSIA,ANSIB,ANSIC". Table 4 on page 12 shows the valid codes.
2. If more than one copy of an item was ordered, then precede the code by the number of copies, e.g. 4PM, 3FDC. Donations are a special case. If a donation was made, precede the code DON by the number of dollars donated, e.g. 25DON. Don't include any cents.
3. *date* is the date the order was packed and shipped, or else an asterisk ("*") to indicate it hasn't been shipped yet. The date is in a particular format:

```
d mmm yy
```

or

dd mmm yy

where *dd* is the day of the month, *mm* is the 3-letter abbreviation for the month (no periods), and *yy* is the year. The day, month, and year are separated from each other a space -- no periods, no dashes or slashes:

<u>Right</u>	<u>Wrong</u>
8 Feb 88	19 Sept 87
08 Feb 87	19 Sep. 87
19 Sep 87	19/09/87
	Sep 19, 87
	19 Sep 1987

- number* is our internal Kermit order number. It begins with "#". No space after the "#". Each new order gets the next highest unused order number.
- amount* is in parens, like this: "(\$265.)" No space after the "\$". Don't forget the dollar sign. If it's a P.O. then you can write "(\$265.-PO)". ALWAYS include the amount. If we're making a free shipment, write "(\$0.-free)". If the order is on a Kermit Newsletter order form (or a copy of it), put an ampersand after the amount, so we can count up how much money the Newsletter brought in: "(\$125.&)"

Please don't put anything else inside the brackets, and be sure to include all the fields. Notes or comments can be entered after the order entry line in parens:

```
[ANSI, *, #1234;]($200.-PO)
(hold for new release)
```

Here's a full entry example:

1. Frank Blackford
2. Multi Business Computer
3. 28 Marlboro Street
4. Portland, CT 06480
5. [ANSIA,ANSIB, 16 Aug 82, #1234](\$200.)
6. (bad tapes, reshipped 12 Sep 82)

Lines 1-3 are "unstructured" address lines. There must be at least two such lines. Line 4 is the location line. Line 5 is the order entry line. There can be more than one of these. Line 6 is a comment.

Additional hints:

- Please be careful not to enter any tabs, only spaces. Also be very careful not to leave spaces or tabs at the end of a line in an address, where you can't see them. To get rid of tabs, you can put the file in EMACS, put the cursor at the top of the file, and then do "ESC-X Untabify".
- If there is a purchase order number, be sure to include it in the address, so the receiver can figure out who the package is for. When you include a P.O. # in the address, make sure it's like "P.O.#xxxxx" or "PO#xxxxx", but *not* "Order #xxxxx", "Purch Order", "Purchase Order", or anything else, so that our mailing label programs can filter these out if desired.
- Anything AFTER the location line is ignored and won't appear in the address. Don't put anything (except P.O. number) above the location line that's not really part of the mailing address, and don't put anything below it that should be part of the address, like "Attn: Fred Foo".
- Rather than make a new entry for a second or subsequent shipment to the same person, just

add a "[*what,date,number*](*amount*)" entry to a previous record when practical. Multiple entries for the same person mean multiple "things" (like newsletters) will be sent to that person whenever we generate mailing labels.

- Remember -- don't put periods in state and country names! "Washington, DC" (not Washington D.C.); "USSR" (not U.S.S.R.).
- Try not to make mailing addresses more than 7 lines long, or have any lines in them longer than about 33 characters (the label program is somewhat more tolerant than this, but better to make reasonable entries in the first place).

Many of these obscure and arbitrary rules may be changed some day, if we ever convert the Who-File to a real database.

If you make certain kinds of errors in an order entry, they will be flagged in the next day's "who.c" report:

```
58164 - Bad Entry: [TKV1,PC,19 Apr 1988, #8338:]($300.--RUSH)
58198 - No location: [ANSIA,PC,18 Apr 88, #8343:]($150.--RUSH)
58212 - Bad Entry: [PM,DUS,DPS,22 Ar 88, #8345:]($90.)
58494 - Unkown Item ANISB: [ANISB,22 Apr 88, #8389:]($100.)
58581 - Bad Entry: [PC,22 Apr 88 #8403:]($20.)
```

This listing shows the approximate line number in the `kermit.who` file where the error occurred. The examples above have dates in improper format, invalid or missing locations (country, or city-state-zip), misspelled item codes (like ANISB for ANSIB), or even a missing comma.

6. Making Tapes

Some tapes can be produced directly on the CUCCA VAX, others have to be done on the bigger machines at the Computer Center. Table 5 shows a summary.

All tapes (except the TK's) are all reel-to-reel, 1/2-inch, 9-track, 1600 bits per inch (bpi), odd parity. Here are the formats described in somewhat more detail:

ANSI	International standard, labelled format. ASCII coding, variable length records ("D format"), blocksize 8192. Used by DEC VAX/VMS and many other machines. We make these on the VAX.
TAR	UNIX format, unlabelled, blocksize 10240. Presumably readable on any Unix machine with a 9-track tape drive. We make these on the VAX.
OS	IBM EBCDIC OS standard-labeled (SL) tape, variable length records ("VB format"), blocksize 8192. Readable on IBM mainframes running OS, MVS, TSO, etc. We make these on the VAX.
CMS	CMS VMPLCF2 format, readable only on IBM CMS systems. We make these on our CMS mainframes.
DUMPER	DEC-20 format, readable only on DEC-20s. We make these on the DEC-20. These are obsolete. Our DEC-20 is almost history. After it goes, we'll keep the final DUMPER master tapes in case anyone is desparate, but these cannot be updated with new versions.
BACKUP	DEC-10 format, readable only on DEC-10s and DEC-20s. We make these on the DEC-20. Same story as DUMPER.
TKV	MicroVAX/VMS TK50 cartridges, written using VMS BACKUP (which must not be confused with DEC-10 BACKUP).
TKU	MicroVAX/Ultrix TK50 cartridges, written using UNIX TAR.

	<u>Code</u>	<u>Description</u>
<u>Tapes</u>	ANSIA	ANSI Tape A
	ANSIB	ANSI Tape B
	ANSIC	ANSI Tape C
	ANSID	ANSI Tape D
	ANSIE	ANSI Tape E
	TARA	Unix Tar Tape A
	TARB	Unix Tar Tape B, etc.
	OSA	OS Tape A
	OSB	OS Tape B, etc
	CMSA	CMS Tape A
	CMSB	CMS Tape B, etc
	BACKUPA	Backup Tape A
	BACKUPB	Backup Tape B, etc
	DUMPERA	Dumper Tape A
	DUMPERB	Dumper Tape B, etc
	TKV1	TK50 #1 (A,B,E), VMS Backup Format
	TKV2	TK50 #2 (C,D,E), VMS Backup Format
TKU1	TK50 #1 (A,B,E), Ultrix Tar Format	
TKU2	TK50 #2 (C,D,E), Ultrix Tar Format	
<u>Diskettes</u>	MAC	Apple Macintosh 3.5" diskette
	MS	DEC Rainbow MS-DOS 5.25" diskette
	CP	DEC Rainbow CP/M 5.25" diskette
	PC	IBM PC 5.25" diskette
	PS	IBM PS/2 3.5" diskette
	VT	DEC VT180 CP/M 5.5" diskette
	DMV	DEC MicroVAX/VMS RX50 diskette
	DUV	DEC MicroVAX/Ultrix RX50 diskette
	DPS	IBM PC MS-Kermit source diskette set
	DUS	UNIX C-Kermit source diskette set
<u>Documents</u>	UG	Kermit User Guide
	PM	Kermit Protocol Manual
	BY	Byte article manuscript
	DC	Data Communications article
	FDC	Kermit Book
	IKV3	Info-Kermit V3
	IKV4	Info-Kermit V4
	IKV5	Info-Kermit V5
IKV6	Info-Kermit V6	
IKV7	Info-Kermit V7, etc.	
<u>Miscellaneous</u>	DON	Donation

Table 4: Kermit Item Codes

<u>Format</u>	<u>Where</u>	<u>How</u>
ANSI	VAX	ansi.sh
TAR	VAX	tar.sh
OS	VAX	os.sh
CMS	CUVMA	maketape
DUMPER	CU20B	DUMPxx.CMD (<i>obsolete</i>)
BACKUP	CU20B	BACKxx.CMD (<i>obsolete</i>)
TKV	CUMIN	TKV%.COM (MicroVAX/VMS TK50)
TKU	CU-CC	(<i>to be filled in...</i>)

Table 5: Kermit Tape Summary

6.1. ANSI, TAR, and OS Tapes

To make an ANSI, TAR, or OS tape on the VAX, follow these steps:

1. Find new tapes, and remove from packing. The magnetic tapes are packed in boxes of ten, and wrapped for protection. Each tape has an "auto-load" mechanism (white ring around the perimeter of the tape), which may be either left on or removed, depending on how temperamental the tape drive is.
2. Place the mag tape on the tape drive, making sure that it is pushed flush against the drive. Lock the tape into position by pushing the center of the hub.
3. Press "load" and wait for tape to mount. A correct mount occurs when the tape feeds into the vacuum chamber, and locks into place. A misfeed will be indicated by a flashing light, accompanied by the flurping sound from the vacuum chamber. If this happens, press "reset," and try again. If the tape consistently fails to load, try cleaning the read/write head and the tape path including the vacuum chamber.
4. After the tape locks into place in the vacuum chamber, press "online" to connect the drive to the system.
5. At the terminal on the VAX, log in. At the "%" prompt, type in the correct command (listed above, explained below).
6. After the tape has rewound, attach the correct label on it (neatly, on the front of the tape reel). Also, get the tape listing from the line printer and put it with the tape. The listing will tell the person exactly what is on the tape, and in what order the files are arranged.

The ANSI, TAR, and OS tapes are produced on the VAX using shell scripts called `ansi.sh`, `tar.sh`, and `os.sh`, respectively. To make any of these tapes, follow these directions:

1. Login to the VAX as yourself if you're not logged in already.
2. `cd ~bob`
3. Type the command appropriate command, for ANSI, OS, or TAR tapes:

```
ansi.sh x n d      (ANSI)
os.sh x n d       (OS)
tar.sh x n d      (TAR)
```

where

x is a, b, c, d, etc, to choose tape A, B, C, D, ...
n is the number of tapes to make. If you leave it out, then 1 tape.
d is which drive to use, 0 or 1. If you leave it out, drive 0.

Examples:

```
ansi.sh a           (Makes one ANSIA tape on drive 0)
tar.sh b 3         (Makes 3 TARB tapes on drive 0)
os.sh c 7 1       (makes 7 OSC tapes on drive 1)
```

The procedures just described are used these days mostly for making "master tapes", since it turns out to be a lot faster to do tape-to-tape copies than disk-to-tape. However, tape-to-tape copies don't automatically produce a listing. So when you make a new master tape, the listing is stored in a file so that it can be printed whenever the a tape is copied. The file is `~bob/tapes/xxxx/y`, where `xxxx` is ANSI, OS, TAR, etc, and `y` is A, B, C, D, or E.

6.2. DUMPER and BACKUP Tapes

NOTE: DEC-10 BACKUP and DEC-20 DUMPER tapes are no longer offered on our order form. Orders from old forms will continue to come in, and we will still fill them. Once our DEC-20 is gone, we will only be able to make copies from the final master.

DUMPER and BACKUP format tapes are made by the operators in the DEC-20 machine room. Before attempting to make these tapes, let the operators know what you're up to:

1. Send electronic mail to `op-leads@cu20b` telling them which tapes you're about to make.
2. Call the shift supervisor (e.g. Ralph Ramirez) at x2652.

The operators have to get new tapes, and they have to know to send them back to bin 7W when done, with the appropriate external labels (stickers), and the appropriate listings attached (this hardly ever works).

To make a DUMPER tape, log in to the DEC-20, CD KD:, and then TAKE DUMPA1 (Tape A), DUMPB1 (Tape B), etc.

To make a BACKUP tape, log in to the DEC-20, CD KD:, and then TAKE BACKA1 (Tape A), BACKB1 (Tape B), etc.

You can get a listing from a DUMPER on the VAX by running the DUMPER program and giving the PRINT command.

6.3. Making Tapes on the IBM Mainframe

Log in to KERMIT on CUVMA through the PACX. After a series of numbers and statements, you will get a "." prompt. If you do not get a "." prompt, hit the carriage return once, and wait until you do. Once you reach CMS command level, type *maketape*, which is the program for writing CMS tapes.

```
Are you starting fresh? Y
How many tapes would you like to make? 1
```

The program will ask you about each tape, as you make it. Since we can now make OS formatted tapes on the VAX, we only make CMS tapes on the IBM mainframe. Also, only make 1600bpi (bits per inch) density, since that density can be read by all the people who request CMS tapes. After you've answered all the questions about the first tape, the program will wait until the operator actually puts the tape on the drive. This could take a long time. If the tape is not on in 20 minutes, call x4005 again, and ask what the

problem is (nicely).

After the first tape runs, you will then have to answer the same questions about the second tape, and so on.

The tapes are but in the "bin" for the courier. A tape listing is printed and sent separately. When the tapes and the listings arrive (1-3 days later), match them by type (CMSA listing to CMSA tape, etc), put a new label on the tape (white address label under the identification label), and store them on the tape shelf for shipment.

6.4. Copying Tapes on the VAX 750

We now have master copies of each kind of Kermit tape. Since these can take some time to produce (especially the DEC-20 and CMS tapes), it is faster to copy these tapes directly, rather than make new ones each time. Any of these formats can be copied on the VAX. The copytape program will copy any kind of tape, reel-to-reel on the VAX, even formats like DUMPER, CMS, or BACKUP, that were not produced on the VAX originally. Here's how to copy a tape:

1. Remove write ring from input tape (tape to be copied).
2. Mount input tape on drive 0, and put drive 0 online.
3. Put write ring in output tape (tape to be copied to).
4. Mount output tape on drive 1, put drive 1 online.
5. Type the following command:

```
copytape
```

The operation should take between 5 and 12 minutes, depending on how much information is on the tape, and how busy the system is.

6. Note carefully whether there has been any error. The error most likely to occur is that the input tape was almost full, and the output tape reached the end before all the input tape was copied. Look for an error message like "I/O Error". If all is OK, proceed, otherwise find Chris or Frank and report what happened.
7. If you want to make another copy of the same tape, go back to step 3.
8. When done copying, give the following two commands:

```
mt off  
mt -f /dev/rmt9 off
```

And wait for the tapes to rewind and unload. Note, you can't give the second command until the first one is completed.

The main problem with tape copies is that you don't get a directory listing of the tape. All I can suggest at this point is to xerox the directory listing that came with the master.

7. Making TK50 Tape Cartridges

TK50 tape cartridges can be made on either the VMS or the Unix MicroVAX. These are not the same. TKV orders are for VMS, TKU orders are for UNIX (Ultrix). Here's how to physically mount the tape:

1. Make sure the write-protect tab is pushed to the right, with no orange showing through.
2. Make sure the green light is on steady and the red button is out.
3. Lift up the little door (if it's not already up) (*don't force it!*).

4. Insert a fresh TK50 cartridge, with the triangle on top, point facing into the drive.
5. Push the cartridge all the way in.
6. Push down the little door.
7. Push in the red button.
8. Wait until the green light comes on steady.

When the job is finished, dismount the tape:

1. Make sure the green light is on steady.
2. Push the red button so it pops out.
3. Lift up the little door.
4. Gently pull out the cartridge.
5. Push the write-protect gizmo to the left, so the orange shows through.
6. Insert a little TK50 label in the slot:

```
KERMIT TAPES A,B,E (or C,D,E for TKV2)
VAX/VMS BACKUP
today's date
```

7.1. VMS TK50s

You can make two different TK50 cartridges, TKV1 (tapes A, B, and E) and TKV2 (tapes C, D, and E). The following example applies to TKV1. To make TKV2, just substitute "TKV2" for "TKV1" everywhere below.

Login to the VMS MicroVAX and physically mount the tape, as shown above. Then type these commands:

1. SET DEFAULT KD:
2. SUBMIT TKV1/NOTIFY/KEEP/NOPRINT/ID

The job should take about 35-50 minutes. When it's finished, you'll get a message on the terminal. TYPE the file TKV1.LOG and look for any error messages. If there's anything suspicious, see Chris or Frank. The listing file will come out on the Watson printer.

Pack the tape with the listing, flyers, manuals, etc, as you would normally pack a Kermit tape. Also include a copy of AATKV.HLP.

You can inquire about VMS batch jobs using the command:

```
SHOW QUEUE/BATCH
```

and you can cancel a batch job with the command:

```
DELETE/ENTRY=xx
```

where *xx* is the batch job ID number.

7.2. Ultrix TK50s

(to be filled in...)

8. Making Kermit Diskettes

We presently make Kermit diskettes for the IBM PC, IBM PS/2, Apple Macintosh, and DEC Rainbow. Table 6 summarizes.

<u>Code</u>	<u>What</u>	<u>Where</u>	<u>How</u>
CP	Rainbow CP/M-86 Kermit	Rainbow	COPY
DMV	MicroVAX/VMS Kermit	MicroVAX	BACKUP
DPS	IBM PC Kermit Sources	IBM PC	DISKCOPY
DUS	C-Kermit Sources	IBM PC	DISKCOPY
DUV	MicroVAX/UNIX Kermit	MicroVAX	tar
HP	HP-150 Kermit	HP-150	COPY
MAC	Mac Kermit	Macintosh	Disk Utility
MS	Rainbow MS Kermit	Rainbow	DISKCOPY
PC	IBM PC Kermit 5.25"	IBM PC	DISKCOPY
PS	IBM PC Kermit 3.5"	IBM PS/2	COPY
VT	DEC VT-180 Kermit	(<i>obsolete</i>)	

Table 6: Kermit Diskette Summary

8.1. IBM PC Kermit Diskettes

These are 5.25-inch floppy diskettes. Each diskette holds 360K bytes, the format is MS-DOS DS (Double Sided) DD (Double Density).

Since you need the IBM PC to make these, you must get out of terminal mode (^]c, then exit from Kermit). Put the DOS disk in drive A and type *diskcopy a: b:* and hit a carriage return. The screen will then instruct you to put the "source" disk in drive A (the source disk is the master disk), and the "copy" disk in drive B (the copy disk is the blank disk).

After the disk is copied (beware of error messages), attach a silver write-protect tab, and the label which indicates Kermit, the version number, and the operating system (PC-DOS), e.g. "MS-DOS Kermit 2.30, IBM PC Family, 360K DS DD, January 1988." (We have ordered some green labels for this but they haven't arrived yet.)

Include a copy of the flyer KER:MSVIBM.DSK.

8.2. IBM PS/2 Kermit Diskettes

On the PS/2 Model 30, follow the procedure for IBM PC diskettes, except use 3.5-inch microfloppies, and label the disk "MS-DOS Kermit 2.30, IBM PC Family, 720K DS DD, January 1988."

These diskettes can also be produced on the PS/2 model 50, but since the model 50 has a higher density disk drive, a special format command must be used:

```
format a: /n:9 /t:80 /v"
```

And then label the volume "KERMIT".

8.3. DEC Rainbow Kermit Diskettes

The disk drives on the Rainbow are different from conventional 5.25-inch drives. They use a special kind of diskette, "RX-50", pre-formatted at the factory. We usually buy them from Datalife. Use the pre-formatted RX-50 type diskette. IBM or other DS DD diskettes won't work.

Also, the top disk goes in right-side up, and the bottom disk goes in upside-down. Match the red arrow on the diskette with the arrow on the drive.

Since the Rainbow can run two different operating systems, we make two different kinds of Rainbow Kermit diskettes: MS-DOS (MS) or CP/M (CP).

8.3.1. Rainbow MS-DOS

Insert the Rainbow MS-DOS Kermit master diskette into drive A (the top one), and the fresh disk into drive B (bottom), *upside down*. Then type

```
diskcopy a: b:
```

Repeat for as many disks as you want to make.

After copying, put a write-protect tab on the diskette, and a label identifying it as "MS-DOS Kermit 2.30, DEC Rainbow, January 1988".

Include a copy of the flyer `KER:MSVRB1.DSK`.

8.3.2. Rainbow CP/M

The Rainbow normally runs MS-DOS, so you can use MS-DOS Kermit on it for terminal emulation. To make a CP/M diskette, you have to start the CP/M operating system.

Make sure the diskette drive doors are open (push the edge of the door in).

Reboot the Rainbow by pressing "F3" then "Ctrl-F3". (That's F3 followed by pressing the same key while holding the control button.) (F3 is SETUP.)

The Rainbow will display the choices of operating system. Use the "down arrow" key to locate the cursor in front of where it says CP/M-86/80, and then press the "DO" key. Once you get the CP/M prompt, insert the Rainbow CP/M Kermit master disk in the top drive (A), and a new fresh disk in the bottom drive (B), *upside down*. Then type:

```
copy a: b:
```

Label the disk "CP/M-86 Kermit 2.9, DEC Rainbow 100".

Put a write-protect sticker on the disk, and include the flyer `KER:C86XRB.DSK` with it.

Repeat this process for as many diskettes as you want to make.

When done, reboot the Rainbow (as above), but this time select MS-DOS. When you get the DOS prompt, type "kermit", and then when you get the `Kermit-MS>` prompt, type "connect" so that you can use the Rainbow as a terminal again.

8.4. Apple Macintosh Kermit Diskettes

Disk Utility - Useful for duplicating the Macintosh Kermit distribution (or any other) diskette, especially on 2-drive systems.

How to duplicate this disk:

1. Boot the Macintosh.
2. Insert the Kermit Distribution disk into the internal drive. Double click on "Kermit Distribution" if necessary.
3. Double click on "Disk Utility".
4. For each disk to be produced:
 - a. Put a fresh disk in the external drive.
 - b. Format the new disk by clicking "format" in the *right-hand* column.
 - c. Click "wr boot blk" in the right column.
 - d. Click "copy ->" in the LEFT column.
 - e. When complete, the copy will eject itself; go back to (a).

As soon as the disk has ejected itself, label it "Macintosh Kermit 0.9(36)b4, January 1988". Then, look on the back of the disk to find the red sliding tab. Push it up to seal the program.

Include the handout KER : XKM936 . DSK with each disk.

8.5. HP-150 Kermit Diskettes

These are 3.5 inch microfloppies. Here's the procedure:

Start the HP-150:

1. Put the system disk in the left drive, and push in the blue button in. Turn on the system (switch in back). Wait a while (like a full minute).
2. Eventually you'll get an error message like:

```
Power-on test failed 1000
Press RETURN to clear
```

Do like it says (press RETURN).
3. MS-DOS version 2.01 should appear on screen (maybe). If instead, you get a message like:

```
Load Op Sys failed, Op Sys device not found
Press RETURN to Clear
```

then make sure you have a real HP-150 boot disk in drive A, with the blue button down. Turn the power off and on again and repeat. Sometimes it takes 3 or 4 tries (or more).
4. Sometimes nothing will happen at all. If nothing appears on the screen after about 2 minutes, turn off the HP-150, give it a gentle whack
5. It's also possible that the HP-150 was configured as a terminal rather than a computer. In that case:
 - a. Press USER SYSTEM key
 - b. Press F8 CONFIG KEYS
 - c. Press F1 GLOBAL CONFIG
 - d. Tab to POWER ON _____
 - e. Press F2 NEXT CHOICE until it says COMPUTER instead of TERMINAL

- f. Press F1 SAVE CONFIG
- g. Turn machine off.
- h. Put system diskette in drive A, and repeat the process above.

Now put a fresh disk in drive B (on the right) and format it.

1. At the A> prompt, type `FORMAT B:`
2. Use arrows on bottom, right side of keyboard to point to Drive B.
3. Press `SELECT` key.
4. Type in the disk volume label, `KERMIT`, followed by carriage return.
5. Press `F5 START FORMAT`.
6. Press `F8 EXIT FORMAT`.

Now remove the HP-150 DOS Boot disk from drive A (left), and insert the HP-150 Kermit master disk. In response to the DOS A> prompt, give the command:

```
copy a:*. * b:
```

(unfortunately, a "diskcopy" program for the HP-150 can't be found). Repeat the format and copy steps for as many disks as you need to make.

Label each Kermit disk "MS-DOS Kermit 2.30, January 1988, HP-150", and push up the red sliding tap on the back of the disk to write-protect it.

Include the handout `KER:MSVHP1.DSK` with the diskette.

8.6. Source Diskettes

We currently offer two source diskette sets, IBM PC MS-DOS Kermit 2.30 (a set of 4 diskettes), and UNIX C-Kermit (2 diskettes). These are both on IBM PC 360K 5.25 inch floppies. The copy procedure is the same as for the IBM PC 5.25 inch Kermit diskette, except that you have to make a copy of each diskette in the set. The MS-DOS set includes the MS-DOS Kermit User Guide (`KX:MSKERM.X9700`) and the flyer `KER:MSSIIBM.DSK`, and the C-Kermit set includes the C-Kermit User Guide (`KX:CKUKER.X9700`), and the flyer `KER:CKUKER.DSK`.

8.7. MicroVAX/VMS Diskettes

The disk drives are RX50s, like on the Rainbow, except you make them on the VMS MicroVAX, CUMIN (the MicroVAX on the right). You have to line up the red arrows on the disk and the drive when you put the disks in.

Begin by putting the master disk in left drive (`DUA2:`) and giving the command:

```
mount dua2: kermit a
```

This assigns logical name `A:` to the master disk. To copy disks, follow this procedure for each copy you want to make:

1. Insert a fresh RX50 diskette in the right drive (`DUA3:`).
2. `mount/foreign dua3: kermit b`
3. `backup a: b: /image` (this should take two minutes).
4. `dismount b`
5. Remove the disk from the drive, write-protect and label it.

To check a copy for correctness:

1. Put the disk in the right-hand drive.
2. `mount dua3: kermit b`
3. `sho dev/mount` (shows it's labeled & mounted, number of free blocks).
4. `dir b:[kermit]`

To create a new master disk:

1. Put it in the left-hand drive.
2. `initialize dua2: kermit`
3. `mount dua2: kermit a`
4. `create/dir a:[kermit]`
5. And then copy the required files into A: [KERMIT].

The disk label should read:

```
VAX/VMS Kermit-32 V.3.3
RX50 MicroVMS COPY Format
Volume KERMIT
Directory [KERMIT]
```

Include a copy of `KER:VMSAAA.DSK` with the diskette.

8.8. MicroVAX/Ultrix Diskettes

More RX50 diskettes. As usual, make sure the red arrows line up when inserting disks into drives.

1. Log in to the Ultrix (UNIX) MicroVAX, "cu-cc" (the one on the left). The user ID is "kermite".
2. Insert a fresh RX50 diskette in the top drive (ra2) (or if you use the bottom one for some reason, it's ra3).
3. `cd ~fdc/kermit`
Change directory to where the files are.
4. `ls -l`
See what the files are. There should be about 4 `ckuker.*` files, plus one executable file called "kermit".
5. `tar cvf /dev/ra2c *`
Copy the files to the diskette in tar format. This should take about a minute.
6. `tar tvf /dev/ra2c`
Read the diskette to make sure the files are on it, the same ones that showed up in the directory listing above.
7. Repeat as needed, then logout.

The disk label should read:

```
UNIX Kermit 4E(070)
MicroVAX-II Ultrix-32m
RX50 "tar" Format
```

Include a copy of `KER:CKUMV2.DSK` with the diskette.

9. Packing a Kermit Order

The primary purpose of Kermit Distribution is to send people the Kermit information and software they request; so proper packing is an essential part of an efficient operation. There are basically two types of orders: the large order that includes at least one magnetic tape, and the order that does not request a magnetic tape.

Also, each order is assigned a priority status, "rush" or "non-rush." An order receives *rush* status if the requestor has included either the \$30.00 surcharge, or a Federal Express account number, or if we are replacing a faulty shipment (when it was really our fault). A *non-rush* order is sent on a first-come, first-served basis, and is sent via United Parcel Service.

Pick the top order from the pile. Estimate the size of it by looking at the items and determine the best shipping container.

1. Match the tape with the order. MAKE SURE THEY AGREE AS TO TAPE FORMAT,CATEGORY (A,B,C), and so forth. If the customer ordered anything special, like the Prime listing or extra manuals, make sure you include them.
2. For tape orders, put the "packet" on the bottom. A *packet* consists of a User Guide, a Protocol Manual, and assorted flyers.

Cover letter	
Tape doc	KER:AATAPE.HLP (for TKV, KER:AATKV.HLP)
"Read Me" file	KER:AAFILES.HLP
Kermit Brochure	KER:AAXFLY.MSS, Scribed and photoffset
Commercial Policy	KER:AAXCOM.DOC
List of Kermit Versions	KER:AAVSYS.HLP
Kermit User Guide	KX:KUSER.X9700
Kermit Protocol Manual	KX:KPROTO.X9700

3. Put the tape on top of the listing.
4. If there was a purchase order, put a copy of it on top of the tape.
5. Crumple scrap paper into the corners of the box so the tape won't rattle around.
6. Close the box and put on the mailing label.
7. Seal the box with clear packing tape; put some tape over the label too, so it won't get smudged.
8. Take the boxes down to the mail room for UPS or US Mail shipment. For Federal Express orders, fill out the Fedex form, specifying "Standard Air" and put in lobby before 4:00pm pickup.
9. Write on the order "SHIPPED", and the date, and your initials (use the "SHIPPED" date stamp).
10. Staple the order and all related papers together and put them in the "TO FILE" box.
11. Go back to the Who File and replace the asterisk with the date we shipped it. Remember that it may sit in the mail room for a few days after that, so the date it was REALLY shipped (and the method used) should appear on the receipt when it comes back from the mail room.
12. The mail clerk will send by first class mail or UPS. Mail is always used for foreign addresses. Sometimes, customers send Federal Express or other special return vouchers; the mail clerk may use those at his/her discretion, but there can be no guarantee.

10. Printed Materials

Manuals, flyers, and so forth must be printed from time to time. Here's a brief summary. First, the manuals:

The Kermit User Guide

This changes only about once every year or two. It's normally printed on the Xerox 9700. The 9700-ready file is in `KX:KUSER.X9700`.

The MS-DOS Kermit User Guide

For version 2.30. `KX:MSKERM.X9700`.

The C-Kermit User Guide

For C-Kermit 4E. `KX:CKUKER.X9700`.

The VMS Kermit User Guide

For Stevens Kermit-32 Version 3.3. `XK:VMSMIT.X9700`.

The Macintosh Kermit User Guide

(still being prepared...)

The Kermit Protocol Manual

This will probably never change again, since it's been more or less superseded by the Kermit book. It's in `KX:KPROTO.X9700`, suitable for printing on the Xerox 9700.

The BYTE Magazine article

This won't change either. It's in `KX:BYTE.X9700`.

The Data Communications article

`KX:DC.TXT`.

Info-Kermit Digests:

V3 July-December 1985. `K5:IMAIL.85A`.

V4 January-June 1986. `K5:IMAIL.86A`.

V5 July-December 1986. `K5:IMAIL.86B`.

V6 January-December 1987. `K5:IMAIL.87A`.

V7 January-June 1988. `K5:IMAIL.88A`.

The User Guide (UG) and Protocol Manual (PM) are printed and delivered automatically on a weekly basis. The Xerox 9700 operators have a master tape, which they run once a week, and deliver the output to the 7th floor. If you run out of manuals, or are getting flooded with them, call the Xerox 9700 operator (currently Jose) at x3294 and make special arrangements.

Note that manuals as printed, have the Table of Contents at the end. So when preparing the UG and PM for shipping, take the Table of Contents pages from the end and insert them after the title page. (Ditto for special UG chapters, like the MS-DOS, VMS, and C-Kermit User Guides.)

The BYTE article can be printed directly from the DEC-20, e.g.

```
print kx:byte.x9700 /unit:x9700/duplex:yes/copies:25
```

The various flyers can be printed from the DEC-20 in the same way, except include the `/orientation:portrait` switch in the PRINT command:

```
print ker:aafiles.hlp /un:x9700/dup:yes/or:p/cop:25
```

11. Filing

Items to be filed are collected in the "TO FILE" box. These include completed orders as well as Federal Express or other receipts that come back later.

Each Kermit order receives a unique Kermit Order Number, like #8765. All parts of the order, including the Kermit Order Form, attached correspondence, check stubs, photocopies of checks, purchase orders, and reshipment forms, shipping receipts, etc., are stapled together. Extraneous and superfluous components, such as duplicate copies, unnecessary information (Kermit flyer parts), can be discarded, to save filing space.

Orders are grouped in hanging files in bunches of 100, numbered 100-199, 3300-3399, etc. Filing is in reverse chronological order, or "highest number first." In each folder of 100 orders, the topmost order is the highest (2099), and the last order is the lowest (2000).

Duplicate orders (two separate orders given the same number) should be removed from the file, and one of the two assigned a new number.

12. Sending Kermit Invoices

There are two payment categories for orders: those who have paid for the software with their order, and those who choose to be billed (for an extra fee). Invoicing is somewhat complicated, so do it slowly, and follow the steps carefully:

1. Make two photocopies of the company purchase order and the Kermit Order Form. Sometimes the purchase order is several pages long-- copy only as far as relevant (where the total is listed).
2. Take a Columbia invoice from the box, and fill out the required information:
 - Customer reference: *customer purchase order number*. Usually on the top of the purchase order form.
 - Name of individual authorizing service: *Company buyer, if listed, and his/her telephone number*. If there is no buyer or similar title listed, write the name of the recipient.
 - CUCCA credit account: When they pay, it gets credited to our account. Always write this number in that box: *4-09200-7500*.
 - Invoice date: *today's date*.
 - Addressee box: on more complicated purchase orders, search for the "billing address," as many institutions (US Armed forces in particular) will bounce these back to us if we address it to the wrong department.
 - **Quantity and description.** Unless specifically indicated by the purchaser, write "1" for quantity and "Kermit Software and documentation," followed by "Kermit reference #xxxx".
 - **Amount.** Write the total amount of the order and underline it two times. (Accountants do this and it looks fancy.)
3. Now things get complicated. Separate the three parts of the invoice. And divide as follows:

- a. Put the top or "invoice" sheet, along with a photocopy of the company purchase order and a photocopy of the Kermit Order Form in the white window envelope (located in the same box as the invoices), and seal. Make sure the address is in the window.
- b. Put the "file copy" and the "copy for accounting", together with the original invoice and a photocopy of the Kermit Order Form in an envelope, and mark it for Terry Thompson, 6th Floor Watson, LOCAL MAIL. Seal and put it with the other outgoing mail.
- c. Staple the original Kermit order form, a photocopy of the purchase order, and any other paperwork together. Write "billed" followed by the date and your initials, and file with the other orders.

13. Printing Mailing Labels for Orders

The "select.sh" procedure lets you produce a file of mailing labels from the Who-File for any selected order numbers. After entering new orders into the Who-File, create a new file "choose.txt", which tells the order numbers you want labels for. This file looks like this:

```
SELECT
xxxxxxx
.
```

The first line is the word SELECT (upper case) and the last line is a dot (period) alone on a line. The lines in between (in place of the xxxxxxx above) contain the desired order numbers, for instance:

```
2761          (select order number 2761)
3200-3215     (select all orders from 3200 to 3215, inclusive)
```

or you can combine numbers or ranges in a list:

```
1234, 2761, 3200-3215, 5722-5731, 5755
```

You can have up to 100 selectors in the choose.txt file. Here's a sample:

```
SELECT
1234, 2761
3200-3215
5722-5731, 5755
.
```

The choose.txt file should be in ~bob on the VAX. Before trying to create the labels, make sure you're connected to that directory:

```
cd ~bob
```

Now all you have to do is type:

```
select.sh > select.log &
```

which submits a "batch job" for background processing. Type "jobs" every so often, until you see this job is gone. Then look at select.log to make sure everything worked right.

The select.sh procedure is set up by default to make a label file that goes on the preprinted sticky labels. To fit on these labels, an address must be no more than 7 lines long, and no line should be more than 33 characters wide.

There are two ways to print the labels: on the LA100 printer that's connected to the Rainbow, or on the Printronix line printer. If the Rainbow printer isn't working, use the Printronix.

13.1. On the Rainbow

To print the labels directly from the Rainbow to the LA100:

1. Load labels into tractor feed.
2. Line up the top of the print head with the bottom of the preprinted phone number.
3. Go to the Rainbow and type the following command, WITHOUT THE CARRIAGE RETURN:

```
cat chosen.lbl
```
4. Now hold down the Ctrl key on the Rainbow and push F2 (Print Screen).
5. Type carriage return.
6. The labels should start to print.
7. When all the labels have printed, Type Ctrl-PrintScreen again. If you forget to do this, then everything you type will also be printed on the printer.

13.2. On the Printronix

To print labels on the Printronix, you must set things up so other users can't print, then load the labels, print them, and finally put the Printronix back the way it was, so it can be used normally:

1. Give the command 'startlabel'. This will prevent any new jobs from coming out on the printer.
2. If a job is currently printing, wait for it to finish.
3. Load the label forms into the Printronix:
 - a. Open the hood.
 - b. Turn the forms-thickness knob (on the left) all the way back.
 - c. Open the tractors.
 - d. Take out the regular paper
 - e. Loosen the right tractor thumbscrew.
 - f. Put in the label forms.
 - g. Move the right tractor to the left to fit the label forms.
 - h. Close the tractors.
4. Align the forms:
 - a. Turn forms so the top of the label is even with the top of the print mechanism.
 - b. Turn the forms thickness knob to 3.
 - c. Close the hood.
 - d. Put the printer On Line.
5. To print the labels, give the command 'lpr -Plabel chosen.lbl' on the Unix terminal. Note the capital P.
6. After the file is all printed, put back the regular paper, readjusting the tractors, and put the forms thickness knob to 1.
7. Set the top of form as follows:
 - a. Push the top of form button.
 - b. Turn the knob on the right to align the page separation with the letter "O" just above

- the Top of Form mark on the left.
- c. Hold the knob tightly with one hand, and turn the wheel so the white mark lines up with the tab.
 - d. Let go of the wheel and turn the knob backwards one full turn.
8. Put the printer back on line.
9. Give the command `'stoplabel'`.

14. Printing Tape Labels

The file `~bob/TAPE.LBL` may be printed on the Printronix using 3-across, 8-down label forms (24 per page) in the manner described in the previous section, except that in this case, you should push Top of Form, align the horizontal perforation of the label forms slightly above the Top of Form marker, set the wheel, and roll back the forms one turn, to ensure that each kind of label goes on its own page.

This file contains the various tape labels (ANSI A, TAR B, OS D, etc) in rough proportion to how often each item is ordered. If you print the whole file, you'll get about 168 ANSI A and B labels, 48 each of TAR B, OS B, and CMS B, and 24 each of the rest. This file was constructed by means too bizarre and complicated to describe here...

15. Office Maintenance

Cleanliness

Try to keep the room neat. Don't throw trash on the floor. Be careful with food, coffee, etc. Garbage/dust buildup can damage disk and tape drives, and can also get us in trouble with the fire marshalls.

Temperature

The air in room 701 must be cool at all times so that the computers can operate properly. Optimum temperature is below 75 degrees Fahrenheit. If the temperature rises above that temperature, check that the four air conditioners are running (set to "cool"). If they are set correctly, but not working, notify Chris. **IMPORTANT:** When it's "cold" outside (say, below 32F?), turn the air conditioners from "cool" to "fan" so that ice doesn't build up inside them. When it warms up outside again, be sure to put them back to "cool".

Lighting

Any problems with lighting (like stinky ballast), tell Chris.

Imagen

The Imagen is a self-service printer. You should make sure that there's Xerox copy paper for it, but beyond that your responsibilities end. If someone asks for your help, you can help them if (a) you want to help them, and (b) you know how to help them. Problems with the Imagen, including service calls to Joel Rosenblatt (Room 711) at X3033. If the Imagen is working, and there is a problem with one of the communication networks (hung job, etc.) talk to Howie, Fuat, or Ken.

Security

Keep room 701 locked (door buttons) as determined by the Kermit staff, and be sure to always lock the supply cabinets when you leave. Also, don't forget to log out from the various VAXes when you leave.

Table of Contents

1. Overview	1
2. Facts	2
3. Answering the Phone	2
4. Opening Kermit Mail	4
5. Entering Orders Into the Who File	5
5.1. The Mailing Address	6
5.1.1. Canada	7
5.1.2. Australia	7
5.1.3. Germany	8
5.1.4. Austria	9
5.1.5. Switzerland	9
5.2. Order Entry Lines	9
6. Making Tapes	11
6.1. ANSI, TAR, and OS Tapes	13
6.2. DUMPER and BACKUP Tapes	14
6.3. Making Tapes on the IBM Mainframe	14
6.4. Copying Tapes on the VAX 750	15
7. Making TK50 Tape Cartridges	15
7.1. VMS TK50s	16
7.2. Ultrix TK50s	17
8. Making Kermit Diskettes	17
8.1. IBM PC Kermit Diskettes	17
8.2. IBM PS/2 Kermit Diskettes	17
8.3. DEC Rainbow Kermit Diskettes	18
8.3.1. Rainbow MS-DOS	18
8.3.2. Rainbow CP/M	18
8.4. Apple Macintosh Kermit Diskettes	19
8.5. HP-150 Kermit Diskettes	19
8.6. Source Diskettes	20
8.7. MicroVAX/VMS Diskettes	20
8.8. MicroVAX/Ultrix Diskettes	21
9. Packing a Kermit Order	22
10. Printed Materials	23
11. Filing	24
12. Sending Kermit Invoices	24
13. Printing Mailing Labels for Orders	25
13.1. On the Rainbow	26
13.2. On the Printronix	26
14. Printing Tape Labels	27
15. Office Maintenance	27

List of Tables

Table 1: Names of Some Countries	7
Table 2: Canadian Province Abbreviations	8
Table 3: Australian State Abbreviations	8
Table 4: Kermit Item Codes	12
Table 5: Kermit Tape Summary	13
Table 6: Kermit Diskette Summary	17