
Using UUCP and Usenet

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Sebastopol, CA 95472

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by Grace Todino and Dale Dougherty

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1991

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Printed in the United States of America.

Editor: Tim O'Reilly

Printing History:

February 1986:	First edition; written by Grace Todino.
November 1986:	Usenet sections updated to Netnews 2.11 by Tim O'Reilly, Linda Lamb, and Dale Dougherty.
May 1987:	Updated for Basic Networking Utilities (HoneyDanBer) UUCP, Xenix, and Berkeley. Sections reorganized and expanded by Dale Dougherty. New diagrams added by Laurel Erickson. Index added. Revised page design by Linda Lamb and Dale Dougherty.
July 1987:	Minor corrections.
April 1989:	Minor corrections.
November 1989:	Minor corrections.
December 1989:	Minor corrections.
July 1990:	Minor corrections.
February 1991:	Minor corrections.
October 1991:	Minor corrections.

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ISBN: 0-937175-10-2

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3.3 Using UUCP and Usenet

There are a couple of simple tricks that you can use to combine multiple files into a single file for transmission purposes.

1. First create a list of the files to be included. You can do this either manually or with a program like `ls` or `find`.
2. Use either of the backup programs `cpio` or `tar` to create an archive on standard output rather than on a backup device.
3. Redirect standard output to a file, then use UUCP to send the archive.
4. Use the same backup program on the target system to restore the archive.

For example, using `find` and `cpio`:

```
newton% find . -print | cpio -oc > archive.cpio
```

or using a manually-generated list of filenames:

```
newton% cpio -oc < filelist > archive.cpio
```

Then, after transferring *archive.cpio*, the remote system, with `uucp`, restores the archive:

```
waltham% cpio -icd < archive.cpio
```

(The `-c` option of `cpio` writes header information in ASCII for portability; `-d` tells `cpio` to create directories if needed when doing the restore; `-i` and `-o` are used, respectively, to copy files in and out.)

A similar example using `tar` might be:

```
newton% tar cf archive.tar `cat filelist`
```

```
·  
·  
·
```

```
waltham% cat archive.tar | tar xf -
```

If you are not familiar with the use of `find`, `cpio` or `tar`, you may want to consult the appropriate command pages in the *UNIX Programmer's Manual* before trying out these commands.

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Using Netnews.

Getting on the Net
Net Articles and Newsgroups
Getting Started

Usenet is a worldwide network of computers that run the netnews software. As described earlier, Usenet is a public forum for the exchange of ideas in the form of news articles that are broadcast to member sites. Net users can post articles, reply by mail or send followup articles to previous ones, or simply read the news using the netnews programs.

The news messages that one gets on the net are as diverse as the persons who send them. To bring some structure into this collection of users and their ideas, news articles are classified into newsgroups.

When your system administrator sets up netnews, he or she may have decided to limit the number of newsgroups that your site will receive and broadcast. You can also define a personal list of newsgroups that you want to read so that you don't need to wade through newsgroups that you aren't interested in.

Using UUCP and Usenet

- ☐ Find out what newsgroups are available at your site.
- ☐ Draw up a list of newsgroups to which you would like to subscribe.

Getting on the Net

The companion handbook, *Managing UUCP and Usenet*, describes installing the netnews software to set up a link into the Usenet network. Obviously, this must be done if your site is to receive news.

Probably the easiest and best way to get on the net is to sign up with UUNET, a non-profit, commercial UUCP and Usenet hookup, originally funded by Usenix, the UNIX technical user's group. UUNET allows you to access the net via the Tymnet or CompuServe public data networks, which have local access phone numbers in most major cities. The off-peak (evening and weekend) connect charges for Tymnet are quite reasonable—\$5/hour. CompuServe is \$5/hour any time.

Alternatively, you can arrange to dial up directly, which may be more efficient if you are using high-speed Telebit Trailblazer modems. (The Trailblazer is optimized for use with UUCP, and is in general use at UUNET.)

Usenix estimates that the monthly cost of a full news feed is about \$250, in addition to the UUNET membership fee of \$35/month. The advantage is that you will be hooked in one hop from a backbone site. UUNET also offers an extensive collection of freely redistributable UNIX source archives.

You don't need to subscribe to UUNET to be able to use their archives via UUCP. By calling 1-900-468-7727 and using the login "uucp" with no password, anyone may uucp any of UUNET's on line source collection. (Start by copying `uunet!usr!spool!ftpl!s-lR.Z`, which is a compressed index of every file in the archives.) As of this writing, the cost is 40 cents per minute. The charges will appear on your next telephone bill.

For more information, contact:

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3110 Fairview Park Drive, Suite 570
P.O. Box 2324
Falls Church, VA 22042
+1 703 876-5050
info@uunet.uu.net
uunetinfo

Net Articles and Newsgroups

The articles on the net are classified into *newsgroups*, according to subject matter. You can think of a newsgroup as a bulletin board or forum devoted to one topic. There are hundreds of newsgroups on the net that cater to every need or mood: newsgroups on technical topics such as artificial intelligence, programming language standards, or particular computer systems, as well as newsgroups for gardening, bugs (the computer kind) or wine. A listing of the current newsgroups as of fall 1989 is provided in Appendix D.

As of November 1986, newsgroups are divided into seven major categories,* as indicated by the first part of their names:

- comp - Groups relating to some aspect of computer science (e.g., *comp.ai*).
- sci - Groups relating to sciences other than computer science (e.g., *sci.physics* or *sci.math.symbolic*).
- news - Groups relating to the netnews software (e.g., *news.admin*) or of general interest to all net users (e.g., *news.announce*).
- rec - Groups relating to recreational activities (e.g., *rec.arts.sf-lovers* or *rec.games.chess*).

*Before this date, there were only two categories: *net*, consisting of groups to which anyone could post, and *mod*, consisting of groups in which postings had first to be approved by a moderator. The recent division of newsgroups into seven categories was done for the express purpose of helping sites to exclude groups they don't want to carry.

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- soc* - Groups for social interaction or discussion of social topics (e.g., *soc.singles* or *soc.culture.jewish*).
- talk* - Groups prone to extended heated discussion (e.g., *talk.religion* or *talk.politics*).
- misc* - Groups that don't fit into any of the other categories (e.g., *misc.jobs.offered* for job postings).

In addition, there may be one or more local newsgroups that are available only in your local area. There may also be groups found only at your site. One of these, called *general*, is almost certain to exist.

In addition to the standard seven hierarchies, and local or regional groups, there are several alternative hierarchies. These are created by groups of people who agree to carry and distribute these groups, independently of the standard hierarchies. Some of the major hierarchies are:

- alt* - Short for "alternative." The original alternative hierarchy. A major feature is that anyone may create any group they please. Major groups include *alt.gourmand*, *alt.aquaria*, and *alt.sources*.
- gnu* - A set of groups devoted to the Free Software Foundations GNU project.
- pubnet* - Groups devoted to the interests of public access UNIX sites.
- bionet* - Groups devoted to the exchange of biological information.

A brief description of each of the currently available net-wide newsgroups is usually kept in */usr/lib/news/newsgroups*. (Your system administrator might have installed the netnews software in another directory than */usr/lib/news*, so inquire if you don't find this file.)

There are currently over 500 active newsgroups. However, your system administrator may not have subscribed to every newsgroup, since keeping all newsgroups can considerably increase telephone traffic and disk space usage. (In particular, *soc* and *talk* groups are not carried by many sites.) However, all groups will be listed in the *newsgroups* file, since it is a mirror image of another file, the *active* file, that the system uses to keep track of which messages have already been received at this site, and which should be rejected.

After looking over the *newsgroups* file, you may want to check with your system administrator to find out what groups are actually available. It is relatively easy to pick up a newsgroup that is requested by users, so don't be afraid to ask for a group your system doesn't ordinarily carry.

As mentioned above, there are also some local newsgroups whose names begin with a distribution prefix that restricts the distribution of the newsgroup to certain geographical areas or organizations. For example, the prefix "ne." in the newsgroup *ne.wanted* indicates that it will only be distributed to sites in New England. Some prefixes that are commonly used are given below. State-wide distribution prefixes usually take the two-letter abbreviation for that state (for example, "ca." for California only).

Table 7-1: Some Local Newsgroup Name Prefixes

Prefix	Distribution
att.	AT&T
can.	Canada
na.	North America
usa.	United States
ne.	New England
	Similar prefixes exist for other regions

A newsgroup name begins with one of the seven category names given above, or one of the local distribution names, followed by a dot (.) and the name of the main group. Newsgroups can also have subgroups. For example, *news.announce.newusers* is a subgroup of *news.announce*. While *news.announce* contains general articles that might be interesting for everyone on the net, *news.announce.newusers* has a specific audience in mind.

Getting Started

The volume of news is enormous. It is almost a certainty that you will not want to subscribe to every newsgroup—or even a significant fraction of the total.

You can specify which newsgroups you want to read by specifying command line options to the program you use for reading news. You can also save these options as a kind of personal subscription list in the file `.newsrc` in your home directory. This file is used by the news software to keep track of what articles you have read, as well as which newsgroups you want to read.

This file is created automatically the first time you try to read news, although the procedure differs depending on which of the news interface programs you use. (There are three programs for reading news in common use: `readnews` and `vnews` are part of the `netnews` distribution; `rn` is an optional program available at many sites.)

Creating `.newsrc` With `readnews`

Details of how to use the three programs for reading news are given in the next chapter. For the moment, let's assume you plan to use `readnews`, which is in many ways the most basic of the three programs.

The first time you invoke `readnews`, you should automatically be shown the newsgroup `general`. If your `netnews` administrator has followed the installation instructions, you should see something like this:

```
% readnews
```

```
-----  
Newsgroup general  
-----
```

```
Article 1 of 4, Nov 16 01:33.  
Subject: Rules for posting to Usenet  
Path: ..!ora!tim (Tim O'Reilly & O'Reilly & Associates, I  
(14 lines) More? [ynq] y
```

```
This group contains several articles that you should  
read in full before using the net.
```

Article 2 contains a paper by Mark Horton entitled "How to Read the Network News." You'll need this to get started.

Article 3 contains a piece by Matt Bishop entitled "How to Use Usenet Effectively." This article answers frequently asked questions about the net, and even more importantly, provides some guidelines about posting to the net. Do not use postnews before reading this article!

Article 4 contains a useful piece on copyright law by Jordan Breslow.

You can go on and read the articles in *general* by typing *y* at the "[ynq]" prompt each time it is shown to you. After you have finished reading (or right away if you want to get on with setting up the *newsr* file), type *q* to quit readnews. (Reading news is discussed in the next chapter.)

If you get the message "no news", then *general* was empty. Your *newsr* file will not be set up either. Try again, this time using the *-n* option to specify the newsgroups you want to read. The easiest thing to do is to type:

```
t readnews -n all
```

Then type *q* to quit without reading news. *newsr* should now contain a complete newsgroup list. Let's see what it might look like:

```
t cd
t more .newsr
comp.ai:
comp.ai.digest:
comp.arch:
comp.bugs.2bsd:
comp.bugs.4bsd:
```

Your *newsr* file contains the entire list of active newsgroups. Each newsgroup name is followed by a colon. If you have actually read one or more articles, the colon will be followed by the numbers of the articles in the newsgroup that you have actually read. (This is how the software keeps from showing you the same article over again.)

Modifying *.newsrc*

Many of the newsgroups listed in *.newsrc* may not be of interest to you. In addition to keeping track of which articles you have already read, *.newsrc* can also be used as your personal subscription list.

As mentioned above, the programs for reading news take a number of options for specifying which articles you want to read. You can specify newsgroups, titles, or the date of articles. However, in most cases, you want to look at a number of different newsgroups, and don't want to have to type a lot of command line options.

You can add an "options" line as the first line of *.newsrc*, and the options on that line will be executed just as if they had been typed on the command line when you invoke a program to read news.

To select which newsgroups you want to read, start the first line of the file with the word "options" and specify the *-n neimportant.roups* option, just as you would when invoking the *readanews* or *vnews* command.

NOTE: As a new user, it is highly recommended that you subscribe to *news.announce.newusers* and *news.announce.important.news.announce.newusers* contains articles relating to proper conduct on the net. These articles are akin to a beginner's primer on Usenet. *news.announce.important* is used for occasional very important announcements.

When using options, you can specify the newsgroups you want, or don't want—whichever is easier. An exclamation point preceding the newsgroup name means you don't want to see it. To specify all subgroups within a group, you can specify "all" following the name of the newsgroup. (For example, *comp.all* means all *comp* groups. *all* by itself means all groups.)

If the list goes over more than one line, begin subsequent lines with spaces or tabs, and they will be treated as continuation lines.

For example, you might include an options line like this:

```
options -n news.all comp.sources.unix comp.text
```

This line will subscribe to all groups in the *news* category plus the two specific groups *comp.sources.unix* (public domain UNIX software) and *comp.text* (text processing).

Or you could specify an options line like this:

```
options -n all !talk.all !soc.all !rec.all \
      !sci.astro !comp.bugs.2bsd !comp.bugs.4bsd
```

This line will subscribe to all groups except the groups listed with exclamation points. Note that you cannot simply specify a list of groups that you don't want without specifying some that you do want. The exclamation point is generally used in this case to specify subgroups that you don't want within a general group that you do want to see.

If you are planning to specify a long list of groups that you do or don't want, there is another way of doing this that may be easier in the long run:

1. Specify the options line options -n all at the start of *newsr.c*.
2. Start reading news. Just read enough of each newsgroup to see if it interests you (otherwise you'll be there forever). If you want to subscribe, type N to jump to the next newsgroup. If you never want to see the newsgroup again, there is a command to unsubscribe. Unfortunately, it differs for each of the three news-reading programs. In readnews, type U, in vnews, type ug, and in rn, type u.
3. Alternatively, you can go down the list of newsgroup names in *newsr.c*, and insert an exclamation point instead of a colon immediately following each newsgroup name that you don't want to see. For example:

```
misc.wanted!
```

means that you have unsubscribed to *misc.wanted*. Changing the "!" character back to a ":" renews your subscription to this group.

Order of Newsgroups

On many systems, newsgroups are presented in the order in which they appear in *newsr.c*. You may want to sort *newsr.c* so that the newsgroups you are most interested in are at the front of the file.

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The newsgroups are initially listed in the order in which they appear in your system's *active* file. Your system administrator may have already ordered this file to put important groups first; however, by default, they are listed in alphabetical order.

Creating *.newsrc* With *rn*

If you plan to use *rn* to read news (see the next chapter for details), you can let *rn* prompt you for a list of newsgroups you want to subscribe to. It automatically runs the *newsetup* program and creates the *.newsrc* file if it doesn't exist the first time you invoke *rn*. If *.newsrc* already exists, it makes a backup copy called *.oldnewsrc*.

```
% rn
Trying to set up a .newsrc file--running newsetup...

Creating .newsrc in /usr/john to be used by news programs.
Done.
```

If you have never used the news system before, you may find the articles in *news.announce.newusers* to be helpful. There is also a manual entry for *rn*.

To get rid of newsgroups you aren't interested in, use the 'u' command. Type h for help at any time while running *rn*.

```
%
```

The u command in *rn* will automatically append an exclamation point after the name of each newsgroup you select for "unsubscription". *rn* also includes a command to reorder the *.newsrc* for you.

8

Reading News

Programs for Reading News
Reading News With `rn`
Finding Out Where You Are

Once you have set up your personal subscription list, you can start reading some of the news in your newsgroups. Let's assume that your `news.rc` file has been set up as described in the previous chapter.

There are three commands used to read news: `vnews`, `readnews` and `rn`. (`rn` may not be available at your site. Currently, the standard distribution has `readnews` and `vnews`, but not `rn`.)

In this chapter, you will learn how to:

- ☐ Read news using `vnews`, `readnews` and `rn`.
- ☐ Display a listing of articles in a newsgroup.
- ☐ Choose a newsgroup or article to read.
- ☐ Save an article in a file.

Note that this chapter is designed to introduce you to the topic of reading netnews, and does not present all of the options available with each of these programs. After you have used the netnews software for a while, you should get a copy of the *man* pages for readnews and rn, which present additional details. These pages may be available on-line with the *man* command, or you can ask your system administrator for a copy.

Programs for Reading News

The vnews, readnews and rn programs differ in the number of options they allow. They also differ in style and speed. (readnews is not screen oriented, vnews is faster than rn for some things, slower for others.) This affects their ease of use and flexibility in moving through newsgroups and articles. But there are some basic similarities among them, and they are summarized here:

- When you invoke any of these programs, the first unread article of the first newsgroup in your *.newsrc* file will be displayed. So, it is good practice to reorder your newsgroups so that the more important ones are listed first.
- A news article is said to be *read* if you go through the entire article. However, there are commands that allow you to mark an article as read without actually going through it, or to mark it as *unread* when you have actually finished reading it. Once an article is read, you normally cannot go back and reread it the next time you invoke any of these programs.
- These programs use a paging program to break the article into pages. You can use some of the pager's commands to control your movement through the file.

A news article always consists of two parts: the header and the body of the news. The header lists some or all of the following information:

- Article number in the newsgroup. Each article received at your site is automatically assigned a number.
- Network address of the sender.

- Newsgroup(s) to which it belongs.
- Subject.
- Usenet message ID.
- Date sent by the author.
- Date received at your site.
- Name of the organization from which it was sent.
- Number of lines in the body of the text.

A Word About Options

The three news-handling programs take quite a few different command line options. As suggested above, you will eventually want to read the *man* pages for each program, since there may be options you want to experiment with.

However, there is one useful set of options that *readnews* and *vnews* have in common. These options give you more control over what you want to read than is given by *newsr*. They include:

- n *newsgroups*** Only show articles in *newsgroups*. If you specify more than one newsgroup, groups in the list should be separated by spaces, not commas.
- t *titles*** Only show articles with *titles*. You don't need to remember the exact title. *titles* is any string that is contained in the title, so you can search for a keyword or two, if you like.
- a [*date*]** Only show articles more recent than *date*. *date* should be in *mm/dd/yy* format.
- x** Ignore the list of already-read articles in *newsr*. That is, show all news, even if it has previously been read. This option is generally used together with one of the other options.
- K** Mark all articles as read, whether they've been seen or not. This option is sometimes useful when you're starting out, since it allows you to ignore the accumulation of old news and read what comes in on a day-to-day basis.

Using UUCP and Usenet

You can also use these options (except -K) with checknews, a program that simply reports whether or not there is news. For example:

```
% checknews -n comp.lang.pascal
There is news.
```

If there is no news, checknews will return without printing any message.

vnews

Once .newsrsrc has been set up, vnews can be invoked without any arguments:

```
% vnews
```

```
News group news.announce
```

```
Article <502@cbosgd.UUCP> Nov 16 06:36
Subject: results of call-for-papers poll
Path: ..!cbosgd!mark
(49 lines)
```

```
more?          news.announce 69/112    Nov 16 1:33
```

In the first 22 lines of the first page, vnews displays the name of the newsgroup, then the header of the first unread article. It then prompts you ("more?") for what to do next. Press **RETURN** to see the next page, or the next unread article when you have read the current one. Press "n" if you want to go to the next article without reading the current article. The last line also tells you that the current article is number 69 out of 112 articles in this newsgroup. It also prints today's date and time. When you reach the end of the article, vnews will prompt you with "next?".

The other commonly-used commands of vnews are given below. Note that you do not have to press **RETURN** after entering a command. Enter "?" at any time to get a complete menu of vnews commands online.

Table 8-1: Some vnews Command Options

Command	Description
c	Mark current news as unread.
+x	Go forward x article.
-	Go to previous article.
A#	Select article by number #
p	Go back to parent article (the last article this is a followup to). Toggle between parent and current article with -.
x'B	Go backward x pages.
x'N	Go forward x lines.
x'P	Go backward x lines.
s file	Save article in file.
r or R	Post a reply to the article you just read. (See Chapter 8 first.)
<esc>R	Reply by mail to an article.
N news	Go to named newsgroup.
ug	Unsubscribe to this newsgroup.

To get out of vnews, press "q". vnews automatically goes to the next newsgroup when you've read all previously unread articles in the current newsgroup.

readnews

readnews is similar to vnews. After the header is displayed, you get the prompt "[ynq]". The main difference is that readnews is line oriented, while vnews is screen oriented.

```
1 readnews
```

```
-----
Newsgroup news.announce
-----
```

```
Article 69 of 112, Nov 16 01:33.
Subject: results of call-for-papers poll
Path: ..!cbosgd!mark (Mark Horton @ Bell Labs, Columbus)
(49 lines) More? [ynq] y
[First, I'd like to correct the previous article. Due to
```

```
--MORE-- (87%)
```

After displaying the header, **readnews** gives a **more** prompt and three command options that have the same meaning as in **vnews**. In the above example, we entered “y” (for “yes”) so **vnews** displayed the first page of the article. At the bottom of the first page, you get another **more** prompt for your next action. Press **RETURN** to see the rest of the article.

Some of the commands of **readnews** are listed below. The “?” key gives a menu of the **readnews** commands online.

Table 8-2: Some **readnews** Commands

Command	Description
n	No. Go to next article.
#	Go to article number # in the current newsgroup.
q	Quit this newsgroup.
U	Unsubscribe from this newsgroup.
N [news]	Go to named newsgroup. Default is next newsgroup.
s [file]	Append article to file. Default is "Articles".
r	Reply by mail to the author of the article. (See Chapter 8 first.)
e	Mark this article as unread.
-	Go back to last article.
b	Back up one article in current newsgroup.
K	Mark remaining articles in this group as read.
v	Print current news version number.

rn

rn is a more complex program that claims to reduce the “dead” time you spend in deciding whether to read an article or not. It is not a part of the standard netnews distribution, but may be available on some systems. It gives you the flexibility to move in and out of articles and newsgroups and perform other tasks such as pattern-matching using regular expressions. The syntax is:

```
rn [option] [newsgroups]
```

You can enter **rn** alone or with a named newsgroup.

rn lets you enter commands at three levels: the *newsgroup selection level*, the *article selection level* (within the newsgroup), and the *pager level* (within the article). All three levels have their own prompts, commands and a menu of these commands. We will describe only some of these commands since you can press “h” at any time in order to get a menu of the commands at each level.

When you invoke **rn**, it first looks for your *.newsrsrc* file, performs some consistency checks on it, and then checks whether new newsgroups have been created that are not in your file. It then prompts you if you want to add these newsgroups to your *.newsrsrc* file.

```
% rn
                                     ***RN NEWS***
                                     .
                                     .
                                     .
Checking out your .newsrsrc--hang on a second...

Checking active list for new newsgroups...

Newsgroup talk.rumors not in .newsrsrc -- add? [yn] n

Put newsgroup where? h
                                     .
                                     .
                                     .
Newsgroup comp.mac.sources not in .newsrsrc -- add? [yn]
```

Typing “n” (without a RETURN) implies that you want to ignore this newsgroup. **rn** then prompts you for the next unlisted new newsgroup. Typing “y” or a SPACE BAR indicates that the newsgroup is to be added to *.newsrsrc*. (Whenever you are given the option in brackets, the default is given first. Typing SPACE BAR means to use the default.)

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The new newsgroup is simply appended to the end of the existing `newsrc` file. Type "h", as we have done above, to get a menu of commands if you want to change the order of the newsgroups. `rn` will go on prompting you until it runs out of new newsgroups.

Reading News With `rn`

If there are no newsgroups, `rn` goes directly to the newsgroup selection level. It displays the number of unread articles in your newsgroups, and then asks you if you want to start reading the articles in the first newsgroup.

```
% rn
Unread news in news.announce      5 articles
Unread news in news.misc          9 articles
.
.
.

**** 5 unread articles in news.announce--read now? [ynq]
```

The last line is the prompt at the newsgroup selection level. The three command options have the following meaning.

Table 8-3: Prompts at the Newsgroup Level

Prompt	Description
y	Read this newsgroup now. Also <code>SPACE BAR</code> .
n	Go to the next newsgroup.
q	Quit the <code>rn</code> program.

Note that you do not press `RETURN` after entering the options at this prompt.

Listing the Articles

It is sometimes useful to list the subject headings in the newsgroup and then decide if you actually want to go through this newsgroup or not. You can get a listing by pressing the equal sign (=) at the newsgroup prompt, as in the example below:

```
***** 5 unread articles in news.announce--read now?
[ynq] =
```

```
85 results of call-for-papers poll
110 Newsgroup conversion is proceeding
111 "soc" and "talk" groups coming out soon
112 Creating new groups
```

```
What next? [npq]
```

You can then enter the article number you want at the "What next?" prompt or press "q" to quit this newsgroup. "p" displays the previous article. Note that, in our listing, articles 86 to 109 have been skipped. These articles have been read or have been deleted by your system administrator.

A partial listing of immediately useful commands is given in the following table.

Table 8-4: Some Commands at the Newsgroup Level

Command	Description
u	Unsubscribe from this newsgroup.
n	Go to next newsgroup with unread news.
N	Go to next newsgroup.
p	Go to previous newsgroup with unread news.
P	Go to previous newsgroup.
\$	Go to the end of the newsgroups list.
L	List the current state of <i>.newsrc</i> .

Using UUCP and Usenet

Reading a Named Newsgroup

Instead of having `rn` go through each newsgroup down your `newsrsrc` list, you can go directly to the newsgroup of your choice. This is done in two ways:

1. Give the newsgroup name when you invoke `rn`. `rn` will first list the number of unread news in that newsgroup and all its subdirectories. You will also get the newsgroup level prompt.
2. Enter "`g newsgroup`" at the newsgroup level prompt.

Reading Articles

When you have selected the newsgroup you want to read, `rn` goes into the article selection level. By default, it prints out unread articles in the order in which they arrived at your site. You are not asked whether you want to read the article before it is displayed; `rn` simply displays the first page and asks if you want to continue.

```
% rn comp.sources.wanted
Unread news in comp.sources.wanted 13 articles

***** 13 unread articles in comp.sources.wanted--read
now? [ynq] y

Article 172 (12 more) in comp.sources.wanted:
From: tim@ora.UUCP (Tim O'Reilly)
Newsgroups: comp.sources.wanted
Subject: Need example nroff terminal table
Message-ID: <921@ora.UUCP>
Date: 11 Nov 86 23:29:40 GMT
Organization: O'Reilly & Associates, Inc., Newton, MA
Lines: 15
Keywords: nroff term table

--MORE-- (61%)
```

The first line says that this is article 172 and that there are 12 more unread articles in this newsgroup. The last line is the prompt at the pager level. Press `[SPACE BAR]` to view the next page. At the end of the article, the following prompt appears:

End of article 172 (of 184) -- what next? [npq]

This is the article level prompt. Some of the commands you can enter at this point are given below.

Table 8-5: Some Commands at the Article Level

Command	Description
n	Go to the next unread article.
p	Go to the previous unread article.
q	Quit this newsgroup.
N	Go to next article.
P	Go to previous article.
-	Go to previously displayed article.
\$	Go to last article.

You can also enter the above commands at the pager level prompt "**MORE**". In addition, you can move through the article using the pager commands given below.

Table 8-6: Some Commands at the Pager Level

Command	Description
d	Display one-half page more.
RETURN	Display one more line.
j	Mark this article as read and go to end of article.
b	Back up one page.
L	Refresh screen.
q	Go to end of current article.

Choosing an Article

You can save a lot of time spent in reading the headers of all articles in a newsgroup by listing the subject headers. Press the equals sign ("=") at the article level prompt, just as you did earlier at the newsgroup level prompt, to get a subject listing. Then enter the number of the article you want to read.

```

      .
      .
      .
--MORE-- (61%)
End of article 172 (of 184)--what next? [npq] 175

```

Entering an article number forces `rn` to go to the end of the current article. The current article is then left in an unread state.

Saving an Article

The `s` command at the article level allows you to save the news article in a named destination *file*. The form:

```
s file
```

entered at the prompt saves the article in your news directory. If the file already exists, `rn` appends the article to it. Let's say that after reading Article 172, we decide to save the contents in a file called `term_request`.

```

      .
      .
      .
End of article 172 (of 184)--what next? [npq]
  a ./term_request

```

```
File /usr/john/News/term_request doesn't exist--
Use mailbox format? [ynq]

```

Pressing "y" saves the news in mailbox format; "n" saves it in normal (non-mailbox) format. If you don't want to save the file, press "q".

The `w` command works the same way as the `s` command but saves the article without its header.

Finding Out Where You Are

When your site subscribed to Usenet, your system administrator should have notified *news.newsls* informing other systems on the network about your system and who you're linked to. A complete database of sites on the network is posted monthly to the newsgroup *comp.mail.maps*. Read this newsgroup to find out what systems are on the net. This will also come in handy when you learn how to post articles and want to send mail to a user on the net.

Note that a UUCP site may not necessarily be a Usenet site. File and mail transfers may occur over UUCP, but not necessarily news. Also, a Usenet site may not necessarily be a UUCP site. UUCP is the most common, but far from the only, method of transferring files.

Most likely, if your system has subscribed to this newsgroup, your system administrator has also picked up a version of a mail program that knows how to use this database to forward mail directly to another site without requiring you to specify an intervening path. Ask your system administrator for details.