Computer Security
Bulletin Board System

USER'S GUIDE

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NIST

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Table of Contents

1. Introduction

An electronic bulletin board system (BBS) is similar to a regular bulletin board, except that all posted information is stored on a computer rather than on a wall. A BBS has several features which a regular bulletin board does not have. For example, on a BBS, one person can leave a message for another person without letting everyone else read it. Also, documents which are too long to post on a regular bulletin board are easily stored on a BBS. Further, BBS documents are categorized for easy reference.

This guide describes the NIST Computer Security BBS and how to use its many features. The guide is written specifically for the user who has never used a bulletin board. Explanations are given on what a BBS is, how and what a "log-on" is and continues with step by step instructions on maneuvering throughout the board. The guide is also geared to the more experienced user as well. The essential functions are divided into separate sections which can stand alone from the rest of the document.

1.1. Purpose of NIST Computer Security Bulletin Board System

The Computer Security Act of 1987 assigned to the National Institute of Standards and Technology (NIST) the responsibility for providing federal agencies with advice and assistance in computer security. To accomplish a portion of this task, the NIST Computer Security Division maintains a BBS which focuses on computer security issues. The NIST Computer Security BBS makes available to federal agencies and to the public a wide variety of computer security information and encourages the sharing of information which can help users and managers protect their data and systems. Information posted on the BBS include an events calendar, software reviews, publications, bibliographies, lists of organizations, and other government bulletin board numbers. This BBS contains no sensitive unclassified or classified information.

1.2. Bulletin Board Access and Structure

The Computer Security BBS operates twenty-four hours a day, charges no fee, and is accessible to anyone who has a computer or terminal with either a modem or *Internet* connection. The BBS requires callers to enter a name and a password, a process called "logging on." All BBS users have equal access to the posted information, and may use the BBS for a maximum of sixty minutes per call and seventy minutes per day. A user who is finished using the BBS disconnects from it, a process called "logging off." The BBS automatically logs off any inactive user, i.e., one who does not press at least one key for a period of three minutes. There will be a warning bell and an on-screen message before automatic log off. If your account is unused after a period of six months, your account is deleted.

The bulletin board system contains three subsystems. The <u>bulletin subsystem</u> consists of topic menus with numerous bulletins listed under each topic. Each bulletin contains a limited amount of information, normally consisting of one to three pages. The bulletins can be viewed on the computer screen or can be downloaded (i.e., transferring the entire file to the user's system) for future reference.

The <u>file subsystem</u> consists of larger amounts of information that can only be viewed by "downloading." The files are separated into directories that can be viewed prior to selecting files to download.

The <u>message subsystem</u> permits users and the system operator (sysop) to exchange short messages, primarily for administrative or informational purposes.

1.3. Organization of Guide

This guide is an extensive tutorial on using all the functions operating on the BBS. You are encouraged to read the complete manual rather than skip from section to section. However, if time does not allow it, you should read Section 2., "Bulletin Board System Basics" and Section 3., "Accessing the BBS." Because most BBS functions operate independently of the primary menus, this manual is divided into sections by the following three major functions:

- **BBS Basics**
  (Section 2., "Bulletin Board Basics" and Section 3., "Accessing The BBS")

- **Obtaining Information**
  (Section 4., "Bulletin and File Functions" and Section 5., "Downloading and Uploading Files and Bulletins")

- **Mail Messages**
  (Section 6., "Messages")

- **Utilities**
  (Section 7., "Utility Functions")

2. BBS Basics

This section describes several primary elements needed to use this manual and the BBS. The symbols used, the help feature, and how to move around the BBS are several of the topics covered.

2.1. Explanation of Symbols

The following is a brief description of symbols that are used on the BBS menus and command lines as well as what is used in this guide.

2.1.1. Brackets and Parentheses

On BBS menus, brackets [ ] and parentheses ( ) indicate single character commands. The MAIN MENU, for example, uses brackets to tell you that the command to list bulletins is 'B':

```
 ------------------------------------------------------------------
          ------*>>> RBBS-PC  MAIN MENU <<<*------
 ---- MAIL ---------- SYSTEM ---------- UTILITIES ----- ELSEWHERE -
 [E]nter Messages    [A]nswer Questions  [H]elp (or ?)
 [K]ill Messages     [B]ulletins                          [F]iles
 [P]ersonal Mail     [C]omment to Sysop                   [G]oodbye
 [R]ead Messages     [I]nitial Welcome   [X]pert on/off   [Q]uit
 [S]can Messages                                          [U]tilities
 [T]opic of Msgs     [W]ho's on           * = unavailable
 ------------------------------------------------------------------
 Current time:  2:50 PM  Minutes remaining: 37    Security: 5
 ------------------------------------------------------------------
 - 37 min left
 MAIN command <?,A,B,C,E,F,H,I,K,P,Q,R,S,T,U,X>?
```

In this manual, "choose [B]ulletins," is equivalent to "type 'B' for bulletins." Other menus on the BBS use both brackets and parentheses to indicate commands. In these cases, the bracketed letter is the default command. That is, if you type anything other than the given commands, the BBS automatically chooses the default command. For example, in the following:

```
 More [Y]es, N)o, C)ont, A)bort, J)ump
```

'Y' for "Yes" is the default.

2.1.2. Angle Brackets (< >)

Angle brackets are used both on the BBS and in this manual to indicate two options. One option is that the user must press a specific key. The other option is that the user must substitute some information (e.g., actual file name.) Examples:

"Press <enter>"	means	Press the enter key, NOT Type the word "enter".
"Type <filename>.txt"	means	Type the name of the file, followed by ".txt", NOT Type the string "filename.txt".

2.1.3. The Carat (^)

The carat (^) is used on the BBS and in this manual to denote control-characters. Hold down the control key ("Ctrl" on the keyboard) while pressing the specified character. For example:

"Press ^X"	means	Hold down the Control key and type 'X'.

2.2. Screen Scrolling

Very often the BBS has more than one screen of information to display. In these situations, the BBS displays one screen at a time, moving to the next screen only when you are ready. This is called scrolling. Choose one of the following options from the Scrolling Menu which appears at the bottom of the screen when you are ready to move to the next screen.

```
More [Y]es, N)o, C)ont, A)bort, J)ump
```

Choose [Y]es (or <enter>)	to see the next screen's worth of information
N)o	to skip the remainder of the display
C)ontinuous display	to view the remainder of the display continuously (faster than you can read it - type ^S to pause the screen at any time, and again to

restart the continuous display; type
^X to abort)

A)bort   to escape from the function you are
                          using

J)ump   to skip to a certain word in the
                          text. (The BBS will ask you to
                          specify the word after you choose
                          J)ump.)

2.3. On-Screen Help

If you have begun to use a BBS function and are not sure how to proceed, use the help command '?' (or 'H'). Help screens are organized by command, so if you are unsure of which command to use in order to accomplish a certain task, this manual will be more helpful than on-screen help.

2.4. Navigating the BBS

Because the BBS commands are displayed on different menus, you often have to move from one menu to another. When you are in a secondary menu, the a)bort command terminates the function you are using, bringing you back to the primary menu from which you began. The primary menus (MAIN, FILES, UTILITIES) include a similar [Q]uit command. [Q]uit allows you to leave the menu you are using in order to move to a different menu or to log off of the BBS:

```
Quit S)ession, C)onference, or to Section M)ain, F)iles, U)tilities?
```

Choose   Quit S)ession   to log off

            C)onference   to enter into a sub-board or conference.
                               (This feature is currently not being used.)

            M)ain   to move to the corresponding
            F)iles   primary menu
            U)tilities

The MAIN MENU also includes commands to quickly change menus, i.e., [F]iles and [U]tilities. Both the MAIN MENU and the FILES MENU include the command, [G]oodbye to log off of the BBS quickly.

2.5. On-Screen Information

Several BBS commands give you information about the BBS and its users. On the MAIN MENU, the [I]nitial welcome displays the information which you see as you log-on to the BBS. This information includes the system operator's (sysop) name, other names and phone numbers for help, and the BBS phone numbers (for modems). [W]ho's On shows you who is logged on to the BBS at the time you issue the command.

3. Acessing the BBS

This section describes how to connect to the BBS using either a modem or a *telnet* connection. The section continues by walking you through the first log-on session, then ends with instructions on what to expect the next time you log-on.

3.1. Methods

There are two ways to access the BBS. The use of a modem and telephone or data line is the most popular choice. If your computer has "Internet" access, then the BBS can also be accessed by using the *telnet* command. Listed below are instructions for using a modem or for accessing the BBS via the Internet.

3.1.1. Modem

To access the NIST BBS by modem you need the following hardware and software:

- Personal computer or terminal with serial communications capability

- Modem and telecommunications software

- Phone or data line (this may be your regular phone)

Set your computer and communications package for the following parameters:

- Modem baud rate of 300, 1200, 2400, or 9600

- 8 data bits with no parity or 7 with even parity

- 1 stop bit

To call the BBS, start your communications package and instruct it to dial the appropriate phone number from the table below. The BBS has two different phone numbers, corresponding to different speeds of data transmission:

(301) 948-5717	300, 1200, or 2400 baud modems
(301) 948-5140	9600 baud modems

If you cannot reach the BBS and believe that your communications hardware and software are working correctly, call the voice line at (301) 975-3359 between 9:00 a.m. and 5:00 p.m., EST.

3.1.2. Internet

To connect to the BBS via the Internet, use the *telnet* command. For example:

- Type 'telnet cs-bbs.nist.gov' or 'telnet 129.6.54.30'.

- The BBS will respond, or if all lines are busy, an appropriate message will be displayed.

Internet users cannot download files through the BBS because the BBS software is personal computer-based and does not download or upload files correctly over the Internet. To access the BBS files, Internet users must exit the *telnet* session and use the *ftp* command as follows:

- Type 'ftp csrc.nist.gov' or 'ftp 129.6.54.11'

- Log in to account *anonymous*, using your internet address as the password.

- BBS files are located in the *bbs* directory .

An index is provided for each sub-directory within the bbs directory. The filenames may be slightly different than the file names listed in the file section of the bbs.

Note: Several BBS features work differently when you access by telnet: Use ^S and ^Q to pause and resume, instead of using ^S twice. (See Section 2.2., "Screen Scrolling.") In addition, you will not have the option to use color or graphics.

3.2. Your First Log-On

Upon successfully reaching the BBS, it will ask you for your name. You may use either upper or lower case letters.

```
What is your FIRST name?  randy
What is your LAST name?  smith
```

The BBS will then ask you to verify. Type 'y' if you have entered your name correctly; 'n' if you have not.

```
Checking Users...
User not found
Are you 'RANDY SMITH'  ([Y],N)? y
```

In this case, the brackets around the Y mean that "yes" is the default answer. Next, the BBS will ask for your City and State.

```
What is your CITY and STATE? Gaithersburg, MD
```

After you type these, the BBS gives you some introductory information to read, and shows you the name and place you have typed. If these are correct, type 'R' for register. If you see that you've made a mistake, type 'C' for change.

```
RANDY SMITH from GAITHERSBURG, MD
C)hange FIRST name/LAST name/CITY and STATE, D)isconnect,[R]egister? r
```

Next, you are asked to enter a password for yourself. Your password may be one through fifteen characters long. We recommend that you use at least six characters.

```
Enter PASSWORD you'll use to log-on again (dot echo)? ......
```

Whenever you type your password, only dots appear on the screen (so that no one else can see it). The BBS will ask you to type the password again in order to verify. Be sure to type it exactly the same way both times.

```
Re-Enter PASSWORD for Verification (dots echo)? ......
```

Note: Your password should be memorized and not shared with anyone.

You then see more information, including the sysop's name, a phone number for help, and the News. Whenever the screen stops and you get a "More" prompt, answer 'y' for yes. Because this is your first time logging on to the BBS, ignore the message about new files. This will be more meaningful later.

After the introductory information, the first menu you will see is the Bulletin Topics Menu. For now, press <enter> to see the MAIN MENU. The MAIN MENU commands will allow you to access all functions of the BBS.

After pressing <enter>, ignore the messages about mail and type 'N' at the check conferences prompt since this feature is not currently operating:

```
Check conferences for mail ([Y], N)? N
```

You are now ready to use all of the BBS functions.

3.3. General Log-on

After the first log-on, when you log on to the BBS, you need to type only your name and
password. (You may type them on the same line, to save time.) Again, you see some
introductory information, along with a message about new files and bulletins that have been
added to the BBS since your last log-on. If there are any new bulletins, you have the option
to read them.

Next, you are notified of new and old messages and messages which you have left for others.
Continue to answer 'N' at the check conferences prompt every time you log-on, since that
feature is currently not operational on this board:

```
Check conferences for mail  ([Y],N)? N
```

After the check conferences prompt, the BBS displays the MAIN MENU.

```
-------------------------------------------------------------------
        ------*>>> RBBS-PC  MAIN MENU <<<*------
---- MAIL ---------- SYSTEM ---------- UTILITIES ----- ELSEWHERE -
[E]nter Messages    [A]nswer Questions  [H]elp (or ?)
[K]ill Messages     [B]ulletins                        [F]iles
[P]ersonal Mail     [C]omment to Sysop                 [G]oodbye
[R]ead Messages     [I]nitial Welcome   [X]pert on/off [Q]uit
[S]can Messages                                        [U]tilities
[T]opic of Msgs     [W]ho's on          * = unavailable
-------------------------------------------------------------------
Current time:  2:50 PM  Minutes remaining: 37   Security: 5
-------------------------------------------------------------------
- 37 min left
MAIN command <?,A,B,C,E,F,H,I,K,P,Q,R,S,T,U,X>?
```


The capabilities of each command are explained in the remainder of this document.

4. Bulletin and File Functions

The information posted on the BBS is contained in either a bulletin or a file. Bulletins range in length from one to three pages and can be viewed on the screen. Files, however, are longer and must be copied or downloaded to your computer before you can read them. Some especially long files must also be decompressed on your computer before you read them. Because of the difference in size, bulletins and files are stored separately on the BBS. For easy reference, both are indexed.

When you log on, the BBS notifies you of the existence of new files and bulletins and sometimes displays the "News" bulletin. The "News" contains information which the sysop deems important for all users and is displayed automatically if it has changed since your last log-on. This section describes how to read new and existing bulletins and how to view the list of files.

4.1. Bulletins

When you log on, the BBS informs you of new bulletins that have been posted since your last log-on. You can choose to view the bulletins during the log-on process or view them at a later time. This section describes how to read bulletins and explains what the "News" bulletin is and how to access it.

4.1.1. Existing Bulletins

To browse through posted bulletins, start at the MAIN MENU and choose [B]ulletins. This gives you a list of categories. Below is an example of a Bulletins Topics Menu. The actual menu viewed when you log-on may be different.

```
┌─────────────────────────────────────────────────────────────────────┐
│                      BULLETIN TOPICS MENU                             │
│                                                                       │
│   1   Using the BBS - READ THIS!        Note:  Viewing Bulletins is   │
│                                         NOT straightforward! The BBS  │
│                                                              makes    │
│   2   Computer Security Alerts          you view all bulletins from   │
│                                         this menu only. For example,  │
│   3   NIST Publications                 if after displaying sub-menu 1,│
│                                         you want to view Bulletin 16, │
│   4   Upcoming Events & Activities      return to this menu and then  │
│                                         enter '16' at the prompt at the│
│   5   Of General Interest               bottom of this menu.          │
│                                                                       │
│   6   Resources                         TO DOWNLOAD BULLETINS, first  │
│                                         note the bulletin numbers.    │
│   7   Computer Security Organizations   Quit this menu, go to the     │
│                                         MAIN MENU & type 'F' to go to │
│                                         the MAIN FILE MENU. Then type │
│                                         'D' to download. To download  │
│                                         Bulletin 24, ex. use filename │
│                                         'BULLET24'                    │
│                                                                       │
│      Read what bulletin(s), L)ist, S)ince, N)ews, ([ENTER] = none)?  │
└─────────────────────────────────────────────────────────────────────┘
```

Choose   Read what bulletins(s)   Type the number listed next to
                                            the category to see a sub-menu
                                            of bulletins.

                L)ist   Displays the Bulletin Topics
                                            Menu

                S)ince   Lists bulletins posted since
                                            last log-on

                N)ews   Displays the "News" bulletin

                ([ENTER])   MAIN MENU is displayed

Corresponding to each category in the Bulletin Topics Menu is a listing or "sub-menu" of
bulletins. At the "Read what bulletin(s)" prompt, type a number listed next to the category to
see a sub-menu or bulletin. For example, after typing '7' at the Bulletin Topics Menu, you
will see sub-menu 7, a list of bulletins about computer security organizations:

```
                 Computer Security Organizations (7)

Bullet #    Last Updated   Topic
--------    ------------   -----
   71        11-06-89      Computer Security Resources Center (CSRC)

   72        03-03-91      Overview of the NIST/NCSL Computer
                           Security Division (Excerpt from the 1990
                           NCSL Annual Report)

   73        12-03-90      Overview of NIST National Computer
                           Systems Laboratory (NCSL) - Excerpt from
                           the 1990 NCSL Annual Report

   74        03-13-90      Announcement of Internet Security Info
                           Archive Computer

   75        02-05-91      Abstract of DOE's Computer Incident
                           Advisory Capability (CIAC)

   76        03-05-91      NIST Computer Systems Laboratory Bulletin
                           "Computer Security Roles of NIST and NSA"
                           (2/91)
```

Notice that all of the bulletins in sub-menu 7 are numbered between 70 and 79. To maintain this numbering system, there cannot be more than ten bulletins in a sub-menu. Therefore, old bulletins are placed in the **Files Section** of the BBS when new bulletins are posted. Usually there are more bulletins listed in a sub-menu than can fit on the screen. After displaying one screen of bulletins, the BBS waits before listing more. You'll see the Scrolling Menu at the bottom of the screen, see Section 2.2., "Screen Scrolling."

```
More [Y]es, N)o, C)ont, A)bort, J)ump
```

Choose [Y]es to list more bulletins. When you see the one you want to read, choose N)o to return to the Bulletin Topics Menu. Then (and only then) enter the number of the bulletin. The BBS does not allow you to enter a bulletin number while you are reading a sub-menu. If the entire Bulletin Topics Menu does not appear on the screen, you will see the Scrolling Menu again. Answer [Y]es for more text, then wait for the BBS to ask for a bulletin number before you specify which one you want to read.

4.1.2. New Bulletins

Recall that when you log-on you are notified of new bulletins (any which have been posted since your last log-on). The BBS lists them by number, and gives you the option to read them immediately:

```
                    Checking new bulletins.
                     6 New bulletin(s) since last call: 2 4 5 26 41 55
                    Read ALL new bulletins?
```

The double digit numbers above tell the user that three new bulletins have been posted. The single digit numbers above refer to bulletin sub-menus. When a bulletin is added to the BBS, the sub-menu which lists that bulletin (sub-menu 2 lists bulletin 26) changes as well. If you answer 'y' at the read new bulletins prompt, the BBS lists all new bulletins in order, displaying the Scrolling Menu after each screen. The Bulletin Topics Menu appears after the new bulletins. Press <enter> to continue the log-on process. If you decide not to read the new bulletins at this time, another opportunity occurs to read the new bulletins. Choose S)ince from the Bulletin Topics Menu. The BBS displays all of the new bulletins in order.

4.1.3. NEWS Bulletin

The "News" bulletin is automatically displayed when you log-on as a new user and every time the sysop changes it. To read this bulletin at any other time, choose N)ews at the Bulletin Topics Menu.

4.2. Files

This section of the guide explains how to view the file listings. All of the commands relevant to files are listed in the FILES MENU. Choose [F]iles from the MAIN MENU to see the FILES MENU:

```
---------------------------------------------------------------------
       ------*>>> RBBS-PC  FILE MENU <<<*------
--- TRANSFER ----- INFORMATION ------- UTILITIES ----- ELSEWHERE -
[D]ownload file    [L]ist files       [H]elp (or ?)    [G]oodbye
[P]ersonal dwnld   [N]ew files                         [Q]uit
[U]pload file      [S]earch files
                   [V]iew archives            * = unavailable


---------------------------------------------------------------------
-            Current time:  2:50 PM  Minutes remaining: 37
---------------------------------------------------------------------
- 37 min left
FILE command <?,D,G,H,L,N,P,Q,S,U,V,X>?
```

On the BBS, files are organized the same as bulletins. To browse through posted files, choose [L]ist Files from the FILES MENU. The BBS displays a list of categories, each of which corresponds to a directory of file names. Below is an example of the file directories. The actual directory viewed when you log-on may be slightly different.

```
            NIST COMPUTER SECURITY BULLETIN BOARD DIRECTORIES

        1       Archive of Computer Security Alerts and Remedies
        2       Events & Activities
        3       General Information
        4       Security Publications
        5       Research Activities
        6       Products, Services & Resources
        7       Risk Forums from the Internet
        8       Virus-l Bulletins from the Internet
        9       Software for this bulletin board

    What directory(s) (A)ll,L)ist,E)xtended +/-, [Q]uit)?
```

Choose   (A)ll   Displays all the files on the BBS

               L)ist   Displays the Files Directories Menu

               E)tended +/-   Restricts any directory listing to one line per file. 'E' turns the extended feature on (and off again, if you press it twice). Alternatively, use '+' and '-' to turn this feature on and off.

To list the files within a single directory, type the number of that directory. File names and brief descriptions are listed. (Unfortunately, there is a "bug" in the BBS software, which sometimes causes the BBS to tell you that a directory is empty even when it is not. If the BBS lists no files and gives you the option to R)elist, choose that option, and the BBS should list the files. File directories are rarely empty.) For example, to see a list of files in directory 4, type '4' at the File Directories Menu:

```
    What directory(s) (A)ll,L)ist,E)xtended +/-, [Q]uit)? 4
```

```
    Scanning directory 4 - Security Publications

    CHESS.ZIP       12845   04-24-91  Six Common PC-DOS Viruses and What
      They Mean To You by David M. Chess, IBM - highly recommended and
      very useful
    RFC1206.ZIP     24258   04-01-91  Information about the Internet
    PADGETT.TXT     17377   04-01-91  Generic Virus Detection by Padgett
      Peterson
    TCPIP.ZIP       33246   03-21-91  Guide to Internet TCP/IP protocols
    TCPIP-PS.ZIP    84822   03-21-91  as above, in PostScript
    HGI.ZIP         20953   03-21-91  Hitchhiker's Guide to the Internet
    HGI-PS.ZIP      20953   03-21-91  as above, in PostScript
```

At the end of each screen, the BBS displays the Files Scrolling Menu:

```
More [Y]es,N)o,C)ont,A)bort,J)ump,V)iew,file(s) to dwnld?
```

Choose   [Y]es   to continue to the next screen

                 N)o   to skip the remainder of the display

                 C)ont   to view the remainder of the display continuously (faster than you can read it - type ^S to pause the screen at any time, and again to restart the continuous display; type ^X to abort)

                 A)bort   to return to the FILES MENU

                 J)ump   to skip to a certain word in the text

                 V)iew   to view contents of an archive file (See Section 4.2.2., "[V]iew Archives")

                 file(s) to dwnld   to download a file (See Section 5., "Downloading and Uploading Files and Bulletins"

4.2.1. Listing Files Selectively

Instead of listing an entire directory of files, you may choose to list only those files posted after a certain date ([N]ew Files) or with certain characters in the file name ([S]earch Files).

To list files posted after a certain date, choose [N]ew Files from the FILES MENU. You must also specify a date:

```
Files on/after MMDDYY?
```

The BBS then displays the File Directories Menu. Choose a single directory to list from or choose A)ll directories:

```
What directory(s) (A)ll,L)ist,E)xtended +/-, [Q]uit)?
```

The BBS lists all of the files that satisfy your date and directory restrictions.[1]

To list files with certain characters in the file name, choose [S]earch Files from the FILES MENU. At the prompt, type what you know of the correct name, with ?'s and *'s in place of what you don't know. These two symbols are called "wild cards." The '?' stands for a single unknown character and '*' stands for several unknown characters. Note: These are the same wild card conventions used by *DOS* users. For example, if you forget the .ZIP on the file name TCPIP-PS.ZIP, use an asterisk in place of the extension:

```
file name?  TCPIP-PS.*
```

The BBS lists all files beginning with "TCPIP-PS.".

Some other legal expressions for searching for "TCPIP-PS.ZIP" are
        ?CPIP-PS.ZIP
        TCPIP-??.ZIP
        PIP.*

The BBS then displays the File Directories Menu. Choose a single directory to list from or choose A)ll directories:

```
What directory(s)  (A)ll,L)ist,E)xtended +/-, [Q]uit)?
```

The BBS lists all of the files that satisfy your name and directory restrictions.[1]

4.2.2. [V]iew Archives

The [V]iew archives command at the FILES MENU allows you to see the contents of an archive file. Occasionally, several files are combined into one file. This feature lists the name and size of all files that are included in this large file. The file extension of an archive file will be ".ZIP." This extension is also used for a single file that has been compressed. See Section 5.1., "Reading Downloaded Bulletins and Files" for an explanation of this feature.

---

[1]Because of a software bug, the BBS may not list any files, even if they exist. If this happens, choose R)elist from the given options. The BBS will list files correctly the second time. Do not be alarmed if the second search finds no files. It is common for selective file searches to result in no files found.

5. Downloading and Uploading Files and Bulletins

Files can be read only after you copy, or download, them to your computer. This section instructs you on how to download files and bulletins. Although you can display bulletins at your screen, you may also wish to download one to your computer. Note: Internet users cannot download, they must use the command *ftp* to retrieve the files. See Section 3.1.2., "Internet" for instructions. Once you have found a file using the [L]ist Files command from the FILES MENU, you can download at the Files Scrolling Menu by typing the file name:

```
More [Y]es,N)o,C)ont,A)bort,J)ump,V)iew,file(s) to download?
```

`<filename>`

Alternatively, if you know the name of the file you want to download and do not need to view the File Directories Menu, start at the FILES MENU and choose [D]ownload. The BBS asks you:

```
Download what file(s)?
```

Either way, type the name of the file you want to download exactly as it appears in the File Directory. If you want to download a bulletin, type "bullet" followed by the number of the bulletin (ex: bullet17). The .zip extension is added to the filename by default. The bulletin, however, has not been "zipped." When the BBS finds the file or bulletin, it asks you to specify a download protocol:

```
          A)scii
          C)rc Xmodem
          X)modem
          Y)modem (1K Xmodem)
          N)one - Cancel

     Select protocol?
```

Choose the appropriate protocol by letter. (Your communications software documentation will tell you which to use.) The BBS prompts:

```
          <protocol> SEND of <filename> ready ^X aborts
```

At this point, do whatever your communications package requires for downloading. (For example, if you are using *ProComm Plus* communications software, press <PgDn> and specify again which protocol you are using.) If your communications package asks you for the name of the file, make sure you type it correctly. If you wish to cancel the download

before it is completed, press ^X. The downloaded file will be stored in whatever directory you are using. After the download is complete, you are returned to the FILES MENU.

5.1. Reading Downloaded Bulletins and Files

Bulletins and small files are immediately readable after they are downloaded. Exit your communications software and type at the DOS prompt:

```
TYPE <filename>
```

The file can also be viewed or printed via any word processing package or editor. Large files have been compressed to save space and are not immediately readable after they have been downloaded. If the name of the file you downloaded has a ".ZIP" extension, it has been compressed or "zipped." However, to read a zipped or compressed file, you must decompress or "unzip" it. Note: The BBS software automatically places a ".ZIP" extension after bulletins. The bulletins have not been compressed.

5.2. Decompressing (Unzipping) Files

To save disk space, many files are compressed "zipped" using the program PKZIP. PKZIP software is necessary for reading (decompressing) compressed files. If you do not have PKZIP, you may download it from the BBS. It is stored in a file called PKZ110.EXE. Note: PKZIP is not a public domain software package. There is a registration fee for using it. The software, once downloaded, lists the name and address of the vendor. Once you have downloaded PKZ110.EXE, exit the BBS and type at the DOS prompt:

```
PKZ110
```

PKZ110.EXE explodes into several programs which enable you to compress and decompress files.

To unzip a zipped file, exit your communications software and type at the DOS prompt:

```
PKUNZIP <filename>.ZIP
```

Your unzipped file <FILENAME>.TXT is then readable.

5.3. [P]ersonal Download

The sysop may send a file specifically to you without posting it on the BBS for everyone else. In this case, choose the [P]ersonal download command from the FILES MENU and proceed as you would for a regular download.

5.4. Uploading Files

If you want to post a file or bulletin on the BBS, you must first send it to the sysop for approval. (Advertisements, job listings, resumes, and executable programs are not allowed on the BBS.) Sending a file from your computer to the BBS is called uploading. Uploading is a slow process but will proceed faster if you compress (zip) your file first. If you do not already have PKZIP software, see Section 5.2 "Decompressing (Unzipping) Files." To compress a file, type the name of the file plus the ".ZIP" extension, and then type the original file name. The syntax for file compression is:

```
PKZIP <filename>.ZIP <filename
```

Note: Internet access does not use the [U]pload command, material must be sent using *ftp*. See Section 3.1.2., "Internet."

To upload your compressed file, choose [U]pload from the FILES MENU. Uploading a file is similar to downloading. The BBS asks:

```
Upload what file(s)?
```

Enter the name of the file you want to upload. Include the period and the extension if the file is not zipped. Include the location of the file (drive) as well. When the BBS finds the file, it asks you to specify an upload protocol. Choose the appropriate protocol for your communications software and the BBS prompts:

```
<protocol> RECEIVE of <filename> ready.  ^X aborts
```

At this point, do whatever your communications package requires for uploading. After a successful upload, the BBS asks you for a short description of your upload (between 10 and 45 characters.):

```
Describe <filename>.  Begin with '/' if for sysop only
```

Begin your description with '/' to avoid having to answer additional questions. To make sure the sysop knows you have sent a file for approval, send him/her a separate message. (See Section 6.1., "Sending Messages.") If the sysop decides not to post your information, you are notified by message.

6. Sending Messages

The BBS allows a user to send a message to another BBS user, to the sysop, or to all users. The commands which are useful for reading and writing messages are found in the MAIN MENU. Note: All messages, private and public may be read by others, including the sysop.

6.1. Sending Messages

To commands can be used to send messages:

```
[E]nter Messages
[C]omment to Sysop
```

Normally, use [E]nter. The BBS asks you to name the recipient.

```
To [A]ll,S)ysop, or name?
```

To specify the recipient, choose 'A' or 'S', or type an individual's complete name. If you choose to send a message to all, realize that the sysop will read it first and decide whether it is appropriate before allowing everyone to read it. (Make sure the message is computer security related. No advertisements, job searches, or obscene messages are allowed!) Also, remember that the sysop has the privilege of reading all private messages on the BBS.

Next, the BBS will ask you for the subject of your message:

```
Subject ?
```

After typing the subject (25 character maximum), proceed to write the message (40 line maximum):

```
Type message 40 lines max (press [Enter] to quit)
   [----------------------------------------------------------]
1:_
```

The message function has a word wrap feature, so you don't have to press <enter> after each line. Use the backspace key to correct errors as you type them. If you do not realize an error soon enough to use backspace (i.e., if you are on another line), you may make corrections by pressing <enter> twice. The BBS displays the Edit Menu:

```
┌─────────────────────────────────────────────────────────────────────────┐
│              Edit Sub-function <A,C,D,E,L,M,R,S,?>?                        │
└─────────────────────────────────────────────────────────────────────────┘
```

Choose   A)bort   to discard the entire message

                 C)ontinue   to continue writing at the point
                                                where you left off

                 D)elete   to correct errors in the message
                 E)dit   (The BBS asks you to specify a line
                 I)nsert   and a word if you choose E)dit.)

                 L)ist   to display all you have written

                 M)argin   to change the right margin from its
                                                default (72 characters)

                 R)evise   to correct an error in the subject

                 S)ave   to send the message

When you are finished composing or editing the message, press <enter> twice to see the Edit Menu again, and choose S)ave. If you have written a message to "all," you are finished after choosing S)ave. The sysop checks over your message and sends it shortly, or notifies you if it is not appropriate. If you have written a message to an individual, you will see the Privacy Menu after choosing S)ave:

```
┌─────────────────────────────────────────────────────────────────────────┐
│   Make message p[U]blic, p(R)ivate, (P)assword-protected, (H)elp?         │
└─────────────────────────────────────────────────────────────────────────┘
```

Normally, choose p(R)ivate. (P[U]blic and (P)assword protected messages require special permission from the sysop and are not very useful.) If you want everyone to be able to read your message, send it to "all" instead of to an individual.

Your completed message will be stored with your name, your recipient's name, a number and a topic, and the recipient will be notified of new mail.

The procedure for sending a [C]omment is the same as [E]ntering a message, except that you are not able to specify a recipient (the sysop is the automatic recipient), and you will not be able to specify a subject.

6.2. Reading Messages

Recall that when you log-on to the BBS, you are notified of your old and new mail:

```
OLD Mail for YOU (* = Private)
*1552*1556*1580
NEW Mail for YOU (* = Private)
*1599
Mail you left
*1591
Please K)ill old/unneeded messages

Check conferences for mail ([Y],N)?
```

Remember to answer 'N' to the check conferences prompt since that feature is currently not operational. The command to read your messages is found in the MAIN MENU:

```
[R]ead messages
```

The BBS then asks you to specify which messages.

```
Msg # 82-1885 (H)elp,S)ince,L)ast,T)o,F)rom,M)ine, text, [Q]uit)?
```

Choose   S)ince   last read (and forward)

           L)ast   last message and backward

           T)o   messages to me, not including to all

           F)rom   messages from me

           M)ine   from or to me, not including to all

           <text>   messages with <text> in the message, topic, or name

           Q)uit   return to the MAIN MENU

           n+ (forward from message number n)
           n- (backward from message number n)

This section explains the options listed above; however, the most common option is to choose:

```
                            L)ast
```

This option displays messages to you and to "all," starting with the most recent and proceeding backward. Messages are displayed for reading with the message number, name of sender and recipient, subject, and date sent and received:

```
        Msg #:  *1557                    MAIN
         From:  MARK SMITH               Sent: 07-15-91 16:05
           To:  KATHY JONES              Rcvd: 07-16-91 12:15
           Re:  SECURITY CONFERENCE

        Kathy,
        Do you know anything about the annual NIST/NCSC Computer
        Security Conference in Washington, DC?
        -Mark
```

Remember, if the message is larger than a screen, you see the Scrolling Menu. (See Section 2.2., "Screen Scrolling.")

If you want to read a specific message, the other options may be useful. All eight options are divided into two groups: filter options and range options:

	F)rom me
FILTER	T)o me, not including to all
OPTIONS	M)ine (from or to me, not including to all)
	<text> (messages with <text> in the message, topic, or name)
	S)ince I last read (and forward)
RANGE	L)ast message and backward
OPTIONS	n+ (forward from message number n)*
	n- (backward from message number n)*

*   '+' and '-' can be used even though they do not appear on the Range and Filter Menu

Specify the filter options first which can vary from none up to two of the four filter options. If you choose no filter option, you see all messages to you, from you, and to all (within the range you specified). Next, you must select exactly one of the four range options. The command executes as soon as you specify the range option, so be sure to specify filter options first. To save time, you may enter the options on one line, separated by spaces.

Examples:

"T Watt L" - Read messages sent to me, with the string "Watt" as part of the name, subject, or message, starting from the most recent message and continuing backward.

"M 160+" - Read messages to or from me (but not to "all") starting with message number 160 and continuing forward.

"S" - Read messages to me, from me, and to all, starting with the oldest message which I have not read yet, and continuing forward.

At the end of each message the BBS indicates if there are more messages which meet your range and filter specifications:

```
More [Y]es,N)o,C)ont,A)bort,H)elp,R)eply,T)hread,=,+,F)orward,K)ill?
```

Choose   Y)es   to keep reading messages one at a time

             N)o   to stop reading messages. Return to Filter Menu.

             C)ont   to read messages nonstop (^S to pause, ^X to abort)

             A)bort   to stop reading and return to MAIN MENU

             H)elp   to obtain help in using the message function

             R)eply   to reply to sender

             T)hread   read other messages having the same subject*

             =   reread same message

             +   read next higher message and continue

             -               read next lower message and continue

             F)orward   forward message to another user

             K)ill   delete message

*   If you choose T)hread, the BBS gives you three additional options:

```
THREAD  +)forward, -)back, 1)from origin ([ENTER] quits)?
```

'+' searches forward from the message you just read.
'-' searches backward from the message you just read.
'1' searches forward from message number 1 (through all messages).

Whatever reading options you choose, when there are no more messages to read, you see the range and filter options again.

6.2.1. Quick Message Search

Reading through individual messages, even with the range and filter options which the BBS provides, is not the fastest way to search for a message. Three commands on the MAIN MENU can help you search quickly:

```
[P]ersonal Mail
[T]opic of Msgs
[S]can Messages
```

6.2.1.1. [P]ersonal Mail

Personal mail repeats the mail listing which you see when you log-on. Messages to you or from you are listed by number. Example:

```
OLD Mail for YOU (* = Private)
*1552*1555
NEW Mail for YOU (* = Private)
*1762
Mail you left
*1557*1761
Please K)ill old/unneeded msgs
```

6.2.1.2. List [T]opic of Messages

Topic of Messages gives you the subject of each message as well as the number. Your personal messages are marked with an asterisk. Specify which messages to list by choosing range and filter options. Be ready to use ^S (pause screen) when you use the [T]opic command; if the list is long, the message list scrolls right off the screen.

6.2.1.3. [S]can Messages

Scan messages gives you even more information than the [T]opics command. A [S]can list includes the message number, date, sender, recipient, and subject for each message, with asterisks marking personal messages. Again, specify which messages to list with range and filter options.

6.3. Erasing Messages

You can erase any message which you have written or which has been sent specifically to you. The command to erase a message is [K]ill. You may kill a message by choosing 'K' from the MAIN MENU and specifying the message number. Alternatively, you may choose 'K' from the options that appear immediately after reading the message you want to kill.

6.4. Responding To Messages

If you wish to reply to a message which has been sent to you, choose R)eply from the options listed after that message. The BBS allows you to write a reply and sends this reply to the original sender. The subject is the same, with an (R) next to it to label it as a reply. Consider the following message which Kathy Jones has received from Mark Smith:

```
Msg #: *1557                      MAIN
 From:  MARK SMITH               Sent: 07-15-91 16:05
   To:  KATHY JONES             Rcvd: 07-16-91 12:15
   Re:  SECURITY CONFERENCE

Kathy,
Do you know anything about the annual NIST/NCSC Computer
Security Conference in Washington, DC?
-Mark
```

To respond, Kathy chooses R)eply. The BBS gives her the option of repeating Mark's message in her reply:

```
                Quote MARK SMITH's message (Y/[N])?
```

If she chooses 'yes' then Mark's message appears, along with the Edit Menu:

```
    A)bort,C)ont,D)el,E)dit,I)nsert,L)ist,M)argin,R)ev subj,S)ave
```

Kathy types 'C' to continue the message where Mark left off. Mark receives the following message:

```
Msg #:   *1563                          MAIN
 From:  KATHY JONES                      Sent: 07-16-91 12:30
   To:  MARK SMITH                       Rcvd: 07-16-91 13:00
   Re:  (R)SECURITY CONFERENCE

> Kathy,
> Do you know anything about the annual NIST/NCSC Computer
> Security Conference in Washington, DC?
> -Mark
Mark,
     The deadline for signing up is September 7th.  I can
send a brochure if you'd like.
-Kathy
```

For clarity, the copied message is indented and marked with >. If Mark and Kathy continue to write back and forth, the subject is unchanged, and the message has several indentations:

```
Msg #:   *1584                          MAIN
 From:  KATHY JONES                      Sent: 07-24-91 10:24
   To:  MARK SMITH                       Rcvd: 07-24-91 14:06
   Re:  (R)SECURITY CONFERENCE

>>>Kathy,
>>>
>>Mark,
>>
>Kathy,
>
Mark,
```

Two users may reply back and forth, using the quote option only until their message reaches forty lines in length. After that, they may continue to reply to each other, but may no longer quote each other.

6.5. Forwarding Messages

You can forward to another user any message which has been sent to you (not to "all"). After reading the message, choose F)orward from the options listed. The BBS displays the message and gives you the option to edit it. Choose S)ave from the Edit Menu (save = send) and then p(R)ivate from the Privacy Menu to send the message. The new recipient of the message is informed of the original sender and recipient.

7. Utility Functions

Because BBS users have different computer capabilities and needs, some BBS features are user-adjustable. Most of the commands to make these changes are found on the UTILITIES MENU. There are also commands within this Menu that provide information about the BBS. To reach the UTILITIES MENU from the MAIN MENU choose [U]tilities; from the FILES MENU, type [Q]uit and choose U)tilities. This section of the guide describes the options that appear on the UTILITIES MENU.

```
-------------------------------------------------------------------
        ------*>>> RBBS-PC  UTILITIES <<<*------
--- DISPLAY -------- INFO --------- SYSTEM ---------- ELSEWHERE -
[E]cho Pref         [H]elp (or ?)   [B]aud Rate Change [Q]uit
[G]raphics          [R]ead Profile  [C]lock Time-Date
[L]ines/Page        [S]tatistics    [F]ile Protocol
[M]essage Margin    [U]ser Log      [P]assword Change
 * = unavailable                    [T]oggles
-------------------------------------------------------------------
Current time:  2:50 PM  Minutes remaining: 37   Security: 5
-------------------------------------------------------------------
- 37 min left
UTIL command <?,B,C,E,F,G,H,L,M,P,Q,R,S,T,U,X>?
```

7.1. [E]cho Preference

This option can be set to have the BBS software display on the screen what you type or your communications software, if applicable, can be set so that it echoes the characters that you type. The default is for the BBS software to display each character on your screen as you type it.

7.2. [G]raphics

This option allows you to view the BBS in color and with graphics if your computer or terminal permits. After typing 'G', the BBS gives you instructions to continue. As you read the instructions, keep in mind that on the BBS, highlighted means colored.

7.3. [L]ines Per Page

This option tells the BBS the number of lines that can fit on your screen. The BBS pauses after the designated lines to allow you to read text. [L]ines per page should be set to whatever your screen can hold minus two. The default setting is 23.

7.4. [M]essage Margin

This option allows you to specify the width of your messages. You can also do this while you are writing a message. (See Section 6.1., "Sending Messages.")

7.5. [R]ead Profile

This option displays the status of the features available in [T]oggles option. (See Section 7.12., "[T]oggles.")

7.6. [S]tatistics

This option displays data on BBS use, including your caller number, the number of active messages, the next message number, and the last message read (by anyone).

7.7. [U]ser Log

This option displays a list of all current users of the BBS, whether they are logged on or not.

7.8. [B]aud Rate Change

This option allows you to speed up the rate at which you receive information from the BBS if you have called in at 300 baud. Using this command allows you to receive information at 450 baud.

7.9. [C]lock Time-Date

This option displays the time, date, and how much time you have left for the day to use the BBS. While this information is already displayed in most cases, it is not displayed for those users who use the BBS in expert mode. See Section 7.12.9., "e[X]pert" for information on that feature.

7.10. [F]ile Protocol

This option allows you to set a default download protocol.

7.11. [P]assword Change

This option allows you to set a new password. Change your password frequently, but, change it immediately if you suspect that someone else knows it. Your password should contain at least six characters and do not use names, numbers or dates which are personally identified with you.

7.12. [T]oggles

This option turns alternately on and off ten BBS features. The status of these ten features are displayed by choosing [R]ead Profile from the UTILITIES MENU.

7.12.1. A)utodownload

ON - Several files can be downloaded consecutively without any user intervention.
OFF - Each file must be downloaded individually.
Default - OFF.

7.12.2. B)ullet

ON - At log-on, gives option to read new bulletins.
OFF - Always gives option to read bulletins.
Default - ON.

7.12.3. C)ase

Your computer/terminal can display upper case characters only or it will display both upper and lower case characters.
Default - upper and lower case.

7.12.4. F)ile

ON - At log-on give option to download new files.
OFF - Does not give option to download.
Default - OFF.

7.12.5. H)ilite

ON - Use color.
OFF - Does not use color.
Default - OFF. This can also be changed with the [G]raphics command at the UTILITIES MENU.

7.12.6. L)ine Feeds

ON - When one line is finished, put the cursor on the next line.
OFF - When one line is finished, put the cursor back at the beginning of that line. (overwrite that line).
Default - ON. Leave this option on.

7.12.7. N)ulls

ON - Insert five nulls (control characters used to accomplish media fill or time fill) between each carriage return and line feed. This slows down processing.
OFF - Does not insert any nulls.
Default - OFF. Normally, leave this option off.

7.12.8. T)urboKey

ON - BBS executes commands immediately after they are typed; no <enter> required.
OFF - BBS does not execute commands until user presses <enter>.
Default - OFF. This option works only at prompts that do not expect text. You will see '!' instead of '?' at turbokey prompts.

7.12.9. e(X)pert

ON - Show only single command lines instead of entire menus (much faster display).
OFF - Show entire menus.
Default - OFF. E(X)pert mode can also be changed by typing 'X' at the MAIN MENU, FILES MENU, or UTILITIES MENU.

7.12.10. !)bell

ON - Sound the bell at every prompt.
OFF - Do not sound the bell.
Default - OFF.

For Additional Information

If you have specific questions or comments regarding the bulletin board or the data contained therin, leave a comment to the BBS sysop (via the message subsystem of the BBS). If you cannot access the board and have verified that your communications hardware and software are functioning properly, call our voice line at (301) 975-3359 and ask for BBS assistance.

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The Computer Security Act of 1987 assigned to the National Institute of Standards and Technology (NIST) the responsibility for providing federal agencies with advice and assistance in the area of computer security. To accomplish a portion of this task the NIST Computer Security Division maintains an electronic bulletin board system (BBS) which focuses on computer security issues. The NIST Computer Security BBS makes available to federal agencies and the public a wide variety of computer security information and encourages the sharing of information which can help users and managers protect their data and systems. This document describes the BBS and provides detailed instructions on how to use the many features.

12. KEY WORDS (6 TO 12 ENTRIES; ALPHABETICAL ORDER; CAPITALIZE ONLY PROPER NAMES; AND SEPARATE KEY WORDS BY SEMICOLONS)

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