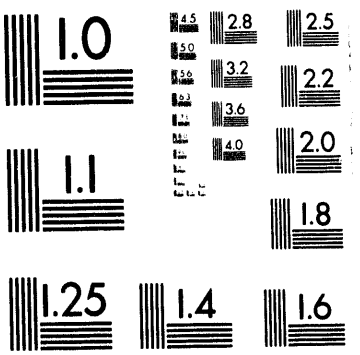
1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6

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Department of Energy

CIAC

Computer Incident Advisory Capability

UCRL-MA-115837

The FELICIA Bulletin Board System and the IRBIS Anonymous FTP Server—

Computer Security Information Sources for the DOE Community

CIAC-2302

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Felicia and Irbis

Introduction

The Computer Incident Advisory Capability (CIAC) operates two information servers for the DOE community, FELICIA (formerly FELIX) and IRBIS. FELICIA is a computer Bulletin Board System (BBS) that can be accessed by telephone with a modem. IRBIS is an anonymous ftp server that can be accessed on the Internet. Both of these servers contain all of the publicly available CIAC, CERT, NIST, and DDN bulletins, virus descriptions, the VIRUS-L moderated virus bulletin board, copies of public domain and shareware virus-detection/protection software, and copies of useful public domain and shareware utility programs. This guide describes how to connect to these systems and obtain files from them.

Quick Start for Advanced Users

FELICIA

Getting Started

Felicia is a BBS connected to the telephone system. To access it with a modem and a terminal, set up your system as 8-bit, no parity, and one stop-bit. The access numbers (commercial and FTS) are:

(510) 423-4753 — 2400 baud or slower
(510) 423-3331 — 9600 baud V.32 or slower
(510) 423-9885 — 19.2K baud ISDN within LLNL or LBNL.

When You Connect

The first time you call, you must register your name and address; once registered, you can go directly to the file and message areas. To download or read files, switch to the file section and follow the instructions to download files. Most of the popular downloading protocols are available, including XMODEM, YMODEM, SEALink, and Kermit.

Scanning Downloaded Software

As with any software you obtain, you should exercise caution and scan individual software packages before using them for the first time. **Unless otherwise indicated, all software on FELICIA and IRBIS has been scanned for known viruses, however it is advisable to scan all downloaded software again with the most recent version of a virus scanning tool.** Be sure to scan archived applications after they have been extracted from the .ZIP, .ARC, or .SIT archive, as most scanning software cannot detect a virus in an application while it is still within an archive.

Shareware

If you are using a shareware package downloaded from FELICIA or any other source, be sure to follow the instructions in the package for compensating the author. The cost is generally minimal ($10 to $50) for some very useful applications.

IRBIS

Using FTP

Irbis is an anonymous ftp server on the Internet, so you must have Internet access to use it. Use one of the following commands to run *ftp* with IRBIS's Internet address:

ftp irbis.llnl.gov
or
ftp 128.115.19.60

When You Connect

Step	Action
1	At the Username: prompt, type: **anonymous** If you do not see this prompt, type: **user anonymous**
2	At the Password: prompt, type your E-mail address such as "jdoe@llnl.gov".
3	All the computer security-related files and documents are in subdirectories of the directory /pub/ciac To download files, use the *get* or *mget* command (see below). The file *0-index.txt* in each directory lists the other files in that directory and briefly describes their contents. The file *news.txt* in the /pub/ciac directory contains a list of the new files placed in the archive.

FELICIA/IRBIS User's Guide

Obtaining Files from the FELICIA BBS

Getting Started

Felicia is a BBS running on a 386SX-20 PC using the TBBS Bulletin Board software. To access FELICIA, you need either a terminal such as a VT100, or a Macintosh or PC running terminal emulation software, and a modem. The best solution is a Macintosh or a PC running terminal emulation software, because, in addition to communicating with FELICIA, you can also download documents and software to your local machine. Terminal emulation programs for the Macintosh include Versaterm and the shareware program RedRyder. For the PC, Qmodem is shareware, and Procomm is available in both shareware and commercial versions.

Communication Settings

The terminal or computer must be attached to a modem and the modem must be attached to the telephone network. Set up the terminal or terminal software for 8 bits, no parity, 1 stop bit. Your terminal manual will describe how to do this. Most terminals have a setup feature where you can set these parameters.

You must also set the speed (known as the baud rate) at which information is sent to the modem. Common modem speeds are 110, 300, 1200, 2400, 9600, and 19.2K baud. The speed in characters per second is roughly the baud rate divided by 10, so 110 baud is about 11 characters, or about one word per second, while 1200 baud is about one line per second. The available speeds depend on your modem, the BBS's modem, and the amount of "noise" on the telephone lines. You should generally use the highest speed possible that both modems can handle.

Most older (but not ancient) modems operate at 1200 baud. Modern modems operate at 2400 baud, 9600 baud, or faster, but can operate at the slower speeds if the foreign modem (the one at the other end of the telephone connection) cannot run that fast. With more modern modems, you set up your terminal to communicate with your modem at the highest speed allowed. Your modem automatically negotiates the best speed with the foreign modem and slows down your transmissions (by buffering your input) to match. Modern modems also compress and decompress data to increase the apparent speed, but this is also handled automatically.

Modem Numbers

FELICIA currently has two modems attached to it:

(510) 423-4753 commercial or FTS at 2400 baud and slower
(510) 423-3331 commercial or FTS at 9600 baud V.32 and slower
(510) 423-9885 ISDN access within LLNL and LBL only.

Line Speeds

The 9600 baud modem is capable of MNP data compression/decompression, so you may be able to get an apparent access rate well in access of 9600 baud if you have a compatible modem. If not, the 9600 baud modem can accommodate most slower modems and protocols.

High-speed ISDN access (19.2K baud) is also available within the Lawrence Livermore and Lawrence Berkeley National Laboratories. The ISDN dataphone number is (510) 423-9885.

Installing a Hayes or Hayes-Compatible Modem

If you have a terminal and a modem, the first step is to connect them together. You must have the right cable; different terminals and computers require different cables. Even if the plugs on the ends of the cable are correct, the internal wiring may not be. A modem is defined as a data set and a terminal is a data terminal. If you connect these two devices with a cable that has a male plug on one end and a female plug on the other, it should work. A problem occurs if you are using a computer as the terminal. Some computers are wired as a data set, and if you plug a data set into a data set, they will not work. In this case, you need a null modem, which is a double-ended connector, or a short cable with connectors on each end, that switches some of the wires around to make a data set appear to be a data terminal. If you do not understand RS-232, data sets and data terminals, get help. Often the only way to determine whether a cable is correctly configured is to get a voltmeter and see what signals are on which wires.

Testing Your Configuration

Test your Hayes or Hayes-compatible modem configuration by typing:

AT

and press **< Enter >**. *AT* is the modem command for Attention and must precede all commands to the modem. If the characters "OK" appear on the screen, then you are set up correctly. Appendix A contains a list of some of the more common modem commands. Check your modem manual to be sure that the commands do the same thing on your modem.

Trouble-Shooting

If it does nothing or prints the number 0, then it may have been set up to give no, or brief, responses. Type **"ATZ"** and press **< Enter >** to reset the modem. Type the string exactly as written, even if you do not see the characters on the screen while you type them. This is the reset command, and should turn echoing on and give text responses to commands.

Try typing **AT** and press **< Enter >** again to see if you get "OK" as a response. If your modem does not respond, or responds with garbage, check all your connections and the modem speed setting. If all seems well, then get knowledgeable help. Modem connection and setup are still something of a black art.

Connecting to the BBS

The next step is to connect to the BBS. Use the modem to dial the telephone number indicated above that most closely matches the maximum speed of your modem. Most modems are Hayes-compatible; if yours is not, you will have to substitute your modem's commands for the ones that follow.

For example, if you are making a long-distance call on a Hayes-compatible modem to the first number above type at your terminal the dialing string:
ATDT 15104234753

☞ If your telephone system requires special access numbers to get an outside line (9, for example), include them as well, just as if you were dialing the number at a phone. You can also include parentheses, dashes, and spaces; most modems don't care. For example, the dialing string:
ATDT 1 (510) 423-4753 connects to the same number as the one above.

Once You Are Connected

After dialing the number, your modem and the BBS will communicate for a while and negotiate the best speed for communications. Your response will usually be something like CONNECT 2400 baud. You are now connected to the BBS and should see the login screen. If you don't see the login screen after the CONNECT response, try pressing **< Enter >** twice, and that should work. Try this a couple of times, or until you see the login screen. If it does not work, then possibly the BBS is down but the modem is still on. Try hanging up (either using the *Hang-Up* command in the terminal emulator package or physically hanging up the phone) and calling again, or try the other BBS phone number. If it still won't work, call CIAC for help.

Using a Non-Hayes-Compatible Modem

To use a non-Hayes-compatible modem, you will have to check the modem documentation for the commands required to make the modem dial a number. In most cases, there's a "wakeup" command such as quickly pressing **< Enter >** or the **< @ >** key twice. Some modems require pressing **< Enter >** twice, a pause, then a third **< Enter >**. Next, you need a command to dial the phone (usually **< D >**) and commands to set pulse or tone dialing (usually **< P >** or **< T) >**, plus commands for any pauses you may need to get through a local PBX.

Logging on to Felicia Using a Hayes-Compatible Modem

Follow these steps to log on to Felicia using a Hayes-compatible modem.

Step	Action
1	Connect to your Hayes-compatible modem and type: **ATDT94233331**
2	When you are connected you will see: *CONNECT 2400* and this screen displays:

```
WARNING:    Unauthorized access to this
computer system is prohibited.  Violators
are subject to criminal and civil penalties.

                WELCOME TO FELICIA

This BBS is run by the Computer Incident Advisory
Capability (CIAC). All users must register and truthfully
answer the new user questionnaire.First Name?
```

3	Type your first name, then follow the next prompts with your last name and then your location. Press Return after each entry. ☞ If this is your first logon, you will be asked to set your terminal type, supply a new password and answer the "New User Questionaire." Follow the instructions on the screen. You will not see this on subsequent logons.

4	The main menu displays:

```
FELICIA BBS - Main Menu
Computer Incident Advisory Capability
=====================================

<*> Information on TBBS
<N>ew files on Felicia
<B>ulletins and System Notices
<F>ile Transfer Section
<M>ail and dialog with Felicia users
<V>irus Database
<R>ecent callers
<T>ime on the system
<U>tilities Section
<G>oodbye

Command:
```

5	To execute any command, type the letter between the angle brackets.	
	< * >	Provides information on the TBBS system.
	< N >	Displays a bulletin containing the most recent additions to the BBS.
	< B >	Contains some bulletins that describe CIAC and the role of this BBS.
	< F >	Takes you to the main menu of the file-transfer section. The file-transfer section contains CIAC and other notices, virus protection software, and other public-domain and shareware utilities.
	< M >	Opens the mail and dialog section. You can leave mail for other users, questions for the System Operator (**SYSOP**) of the BBS, or participate in the Dialog open forum.
	< V >	Opens the virus database section. Here you can get information about different computer viruses and their characteristics.
	< R >	Displays a list of recent callers.
	< T >	Displays the amount of time you have been on the system. You are currently limited to 60 minutes a day. Leave a message for the **SYSOP** if you need more time.
	< U >	Allows you to change your terminal type or password.
	< G >	Says good-by and hangs up.

Obtaining Files From Felicia

Follow these steps to download files from Felicia.

Step	Action
1	Type: **f** You will see the following menu

```
FELICIA BBS - File Transfer Section
Computer Incident Advisory Capability
=====================================

<D>ownload Area

<U>pload Area

<->Previous Menu

<T>ime on the system

<G>oodbye


Command:
```

Step	Action
2	Type **d** You will move to the Download section and see the following menu:

```
FELICIA BBS - File Download Section
Computer Incident Advisory Capability

=====================================
Select A Download Area From The Following List

<M>acintosh Files

Macintos<h> Utility Programs

<P>C Files

PC <U>tility Programs

<A>tari files

<L> Incident Handling Guidelines

<C>IAC Documents

C<E>RT Documents

<N>IST Documents

<D>DN Documents

NA<S>A-SPAN documents

<V>irus-L Moderated News

<R>eviews of anti-virus software

<O>ther useful stuff.

<->Previous menu

<T>ime on the system

<G>oodbye

Command:
```

3	Determine which files you want, type the letter within the angle brackets indicated for this area. For example, if you are interested in the PC files, press **P** and the next menu appears. ☞ **At any time you can press s to stop a listing or p to pause.**

```
Type P to Pause, S to Stop listing

PC-DOS/MS-DOS VIRUS DETECTION AND PROTECTION FILES

The following files and programs are for PC and compatible
   computers running PC-DOS or MS-DOS.

Files with the .TXT extension are simple text files. They can be
   downloaded with Xmodem, Ymodem or ASCII.

Files with the .ZIP extension are .ZIP archives, and must be
   extracted with PKUNZIP.EXE. PKUNZIP.EXE is in the file
   PKZ102.EXE, which is a self extracting .ZIP archive. Download
   these with a binary protocol such as Binary Xmodem or Binary
   Ymodem.

Files with the .ARC extension are .ARC archives, and must be
   extracted with ARC.EXE.

Note that McAfee's software and Hoffman's virus Summary may not be
   used by any organization without a license. However, they may
   be used by individuals. Please read the license requirements in
   the documentation supplied with the software before using it.


---------- New Stuff for PCs (Warning: not tested yet)----------
FP-204A.ZIP   269411   7-09-92  F-PROT 2.0.4a protection/detection
PKZ110.EXE    149251   7-08-92  PKZIP v 1.10 archiver - self
                                  extracting
VIRX19.ZIP     71629   2-05-92  VIRx 1.9 scanner
A-VIRUS1.ARC    8615  11-14-91  Information on AIDS Trojan
AIDSOUT.ARC    45400  11-14-91  AIDS Trojan remover, use after SCANV
AIDSTECH.ARC   40618  11-14-91  Tech info on PC Cyborg AIDS disk Trojan
ALERT14G.ARC   94186  11-14-91  Government virus checker (well done)
AUTOSN32.ZIP   40015  11-14-91  Checks ZIP/other archives for
                                  infections
AVS224E.ZIP    76475  11-14-91  AVSEARCHv2.24e:Scans for >158 viruses
BOMBSQAD.ARC    4663  11-14-91  Check for Trojan Horses
BOOTCHEK.ARC   23100  11-14-91  Verifies disk boot sector vs secure
                                  copy
.
.(deleted lines)
.
<D>ownload, <P>rotocol, <E>xamine, <N>ew, <H>elp, or <L>ist
Selection or <CR> to exit:
```

4	To execute any of the commands at the bottom of the page, type the letter within the angle brackets.	
	< D >ownload	Download one or more files to your local machine.
	< P >rotocol	Change the downloading protocol. The first time you download a file, this is done automatically **(see step 5)**.
	< E >xamine	Look at the contents in a *ARC* archive.
	< N >ew	Followed with a date, lists files newer that that date.
	< H >elp	Get help on these commands.
	< L >ist	List this directory again.
5	To download a file such as *FP-204A.ZIP*, press **< D >** and you will be asked to **< Enter >** the file's name. The first time you download a file you will see the protocol menu. To change the protocol for a later download, use the **< P >** command. When you are ready to download, select the protocol you want to use from this menu and start the download on your local machine:	

```
<D>ownload, <P>rotocol, <E>xamine, <N>ew, <H>elp, or <L>ist
Selection or <CR> to exit: d

File Name? FP-204A.ZIP

Select from the following transfer protocols:

1 - TYPE file to your screen
2 - ASCII with DC2/DC4 Capture
3 - ASCII only, no Control Codes
4 - XMODEM
5 - YMODEM/YMODEM-g
6 - YMODEM/YMODEM-g Batch
7 - SEAlink
8 - KERMIT
9 - SuperKERMIT (Sliding Windows)

Protocol=YMODEM   File FP-204A.ZIP,  264 records
Est. Time:    5 mins, 54 secs at 192K bps

Awaiting Start Signal
(< Ctrl-X > to abort)
```

Down-loading Protocols

The downloading protocol is the method used to download a file and to ensure that it has downloaded correctly. The protocol you pick depends on the terminal you have and its capabilities. Most terminal emulators support XMODEM or KERMIT. While YMODEM and Super Kermit tend to be faster, pick the protocol you are most comfortable with. The *TYPE* protocol is only for short documents and simply prints the document on your terminal. Don't use the ASCII download protocols. They are a last resort for systems that can not use the formal error-correcting protocols.

Down-loading to a Macintosh

If you are downloading to a Macintosh, be sure to set the correct version of the downloading protocol on your Macintosh. If you are downloading a text file, use the Text version of the downloading protocol (for example, Text-XMODEM, Text-YMODEM) on your Macintosh. The *Text* version of the downloading protocol corrects for differences in the end-of-line characters used on the PC and Macintosh systems (the PC wants a **< CR-LF >** at the end of a line, while the Macintosh wants a **< Return >** only). When downloading a binary Macintosh file such as a program file, a formatted document, or an archive, be sure to set the MacBinary form of the protocol (for example, MacBinary-XMODEM) on your Macintosh. If you use the Binary instead of MacBinary protocol, you can do the conversion later, using either the Apple File Exchange utility included with the Macintosh system software or an archiving program such as Aladdin Systems StuffIt.

When you have selected the downloading protocol, the BBS pauses, waiting for you to start the download at your terminal. Start your local download; if all goes well, you'll have a file in a few minutes.

Unpacking Compressed Archive Files

Downloadable PC-DOS/MS-DOS files are either text files (.TXT), ZIP or ARC archives (.ZIP or .ARC), or executables (.COM or .EXE). Text files and executables can be downloaded directly and used. Be sure to use a binary downloading capability such as XMODEM for the executable files and archives. Files in ZIP archives must be extracted after downloading with PKUNZIP before they can be used. Macintosh files in SIT archives must be extracted with StuffIt before they can be used. Macintosh files in .CPT archives must be extracted with Compactor or Extractor. Archiving utilities for both PC and Macintosh files are available in their respective utility file sections.

On the Macintosh

On the Macintosh, archived files are normally in StuffIt (.SIT) or Compactor (.CPT) format. Run whichever program corresponds to the archive you want to extract. With the program running, open the archive file, select the files you want to extract, and execute the Extract command (**< A >** button in StuffIt or a menu item in Compactor). The files will be extracted to your disk.

On the PC, self extracting archives are executable files (.EXE). Again, just run them to extract the files.

On the PC

On the PC, the most common archive format is .ZIP. To extract files in the .ZIP format, you need either the PKUNZIP shareware utility or a DOS Shell program, such as Magellan, that has a built-in .ZIP archive capability. For example, to extract all the files in the **FP-204A.ZIP** archive into the current directory, type, "**pkunzip FP-204A.ZIP**."

If you type "**pkunzip**" without any arguments, it will give you a list of the command-line arguments.

SEA files are self-extracting archives, simply run them to extract the files.

Obtaining Files From IRBIS

Internet Access Required

The **IRBIS.LLNL.GOV** anonymous ftp server is available over the Internet at IP address **128.115.19.60**. To access files on IRBIS, you must have access to the Internet and must be able to run ftp on your local system. Your local SYSOP will tell you if ftp is available and whether you are connected to the Internet.

Using ftp

Step	Action
1	Open an ftp connection to IRBIS by typing **ftp irbis.llnl.gov**
or 2	If ftp is already running, use the **o** (open) command, followed by **IRBIS.LLNL.GOV** at the ftp prompt: **FTP> o irbis.llnl.gov**
or 3	If that doesn't work, and your computer complains that it can not find IRBIS, try using IRBIS's Internet address instead of its name, i.e. **ftp 128.115.19.60** or **FTP> o 128.115.19.60**

Trouble-Shooting

If this does not work, call your SYSOP for help.

When Connected

Step	Action
1	When you see the Username: prompt type **"anonymous"**. If the Username: prompt does not appear, type the command **"user"** and you will get the prompt.
2	When you see the Password: prompt type your E-mail address such as **jdoe@llnl.gov** It will not appear when it is typed.
3	When your connection is made you will see:

```
ROGUE$ ftp irbis.llnl.gov
ROGUE.LLNL.GOV MultiNet FTP user process 3.1(105)
Connection opened (Assuming 8-bit connections)
<irbis.llnl.gov FTP server (Version 6.16 Mon Jun 15 12:04:36 PDT
1992) ready.
IRBIS.LLNL.GOV>user anonymous
<Guest login ok, send e-mail address as password.
Password:
<  This is the IRBIS archive, provided and maintained by
<  the Computer Security Group, Lawrence Livermore National
<  Laboratory.
<  Access is allowed all day.
<  All activity is logged with your host name and email address.
<  If your FTP client crashes or hangs shortly after login, try
<  using a dash (-) as the first character of your password.

<Guest login ok, access restrictions apply.
```

Locating Files

Now that you are attached to IRBIS, you need to find the files you're interested in. Use the following commands to move around the directory system and download files:

Commands	Action
cd	Change Directory, follow with the path to the directory you want to access. Use .. as the directory name to backup one directory or/ to backup to the login directory.
ls	List the file and directory names in a directory.
dir	Full directory listing, including file size, modification dates, ownership, and permissions.
binary	Change the mode for downloading files to binary. Execute this command before downloading anything but pure text files to ensure that you get an unmodified file.
ascii	Change the mode for downloading to ASCII. If you have switched to binary mode, execute this command before downloading pure text files. ftp automatically changes the end-of-line characters to the ones your machine expects.
get	Get a file. Follow this command with the name of the file you want to download to your machine.
mget	Multiple get. Follow this command with a file name that include wild-card characters to select and download multiple files. The wild-card character * stands for any number of any characters, and ? stands for any single character.
put	Upload a file to IRBIS. This is not allowed in most IRBIS directories.
mput	Multiple put. Upload multiple files to IRBIS. This is not allowed in most IRBIS directories.
close	Close the connection to the remote machine.
quit	Close any connections and end ftp.
?, h, help	List the available commands.

There are more commands available, but these will handle most of what you need to do.

Listing Directories

The *ls* command lists all the files and directories in the current directory. Start by listing the current directory with the *ls* command:

```
IRBIS.LLNL.GOV>ls
<Opening ASCII mode data connection for file list.
lost+found
etc
bin
pub
usr
dev
incoming
.login_message
<Transfer complete.
```

Changing Directories

The *cd* command is used to change directories. The *cd* followed by a directory name changes to that directory. The .. directory name always takes you to the parent directory of the current directory. In this manner, you can move around the directory structure to find the files you want. Change to the *pub* (public) directory, and list the files there:

```
IRBIS.LLNL.GOV>cd pub
<CWD command successful.
IRBIS.LLNL.GOV>ls
<Opening ASCII mode data connection for file list.
spi
ciac
felix
util
patches
<Transfer complete.
```

CIAC Files

The CIAC files are in the ciac directory, so change to that directory and list its contents:

```
IRBIS.LLNL.GOV>cd ciac
<CWD command successful.
IRBIS.LLNL.GOV>ls
<Opening ASCII mode data connection for file list.
0-readme.txt
news.txt
pcvirus
pcutils
macvirus
macutils
atarivir
reviews
books
virus-l
ciacdoc
certdoc
ddndoc
nasaspan
nistdoc
ihg
<Transfer complete.
```

Content Information

The contents of each of these files and directories are as follows:

File Name	Contents
0-readme.txt	Text file: describes the contents of these directories.
news.txt	Text file: lists the latest additions to IRBIS.
pcvirus	Directory: PC virus descriptions and anti-virus software.
pcutils	Directory: Useful PC utility software.
macvirus	Directory: Mac virus descriptions and anti-virus software.
macutils	Directory: Useful Macintosh utility software.
atarivir	Directory: Atari virus descriptions and anti-virus software.
reviews	Directory: Reviews of anti-virus software packages and books.
books	Directory: Books on computer security.
VIRUS-L	Directory: The VIRUS-L moderated news service.
ciacdoc	Directory: CIAC documents.
certdoc	Directory: CERT documents.
ddndoc	Directory: DDN documents.
nasaspan	Directory: NASA and SPAN documents.
nistdoc	Directory: NIST documents.
ihg	Directory: The CIAC incident handling guidelines.

CIAC Notices

The CIAC notices are in the ciacdoc directory, so change to that directory and list its contents:

```
IRBIS.LLNL.GOV>cd ciac
<CWD command successful.
IRBIS.LLNL.GOV>ls
<Opening ASCII mode data connection for file list.
fy89
a-fy90
b-fy91
c-fy92
d-fy93
e-fy94
xref.txt
<Transfer complete.
```

Contents of the Directories

Each of these subdirectories contains the CIAC notices for a particular fiscal year. CIAC notices are numbered with a letter followed by a sequence number, where the letter *A* is used for fiscal year 1990, *B* for 1991, and so forth. The document *xref.txt* is a text file containing a cross-reference of CIAC notices, platforms, and problem type. Each directory contains a file, named *0-index.txt*, that contains the name of each notice and its number.

Virus Information

Next, change to the pcvirus directory and list its contents. Use the *cd* command followed by the .. directory to backup to the ciac directory, then use *cd* with the pcvirus directory to move there. This could have been done in one step using the *cd* command with a directory path ../pcvirus.

```
IRBIS.LLNL.GOV>cd ..
<CWD command successful.
IRBIS.LLNL.GOV>cd pcvirus
<CWD command successful.
IRBIS.LLNL.GOV>ls
<Opening ASCII mode data connection for file list.
0-index.txt
a-virus1.arc
aidsout.arc
aidstech.arc
alert14g.arc
. . . (skipped lines)
fp-204a.zip
<Transfer complete.
```

Getting a Text File

These files contain descriptions of PC computer viruses and virus protection software. The file named *0-index.txt* contains a list of the other files and their purpose. Download this file and read it to see which files you need. To get a copy of this file, use the *get* command followed by the file name:

```
IRBIS.LLNL.GOV>get 0-index.txt
  To local file: 0-index.txt
<Opening ASCII mode data connection for 0-index.txt (4251 bytes).
<Transfer complete.
```

☞ **The file is now on your local disk, where you can read it with any text editor.**

Getting a Binary File

To get a copy of the file fp-204a.zip, first change to binary mode, because this is a binary file and you don't want any changes made to it. Then, use the *get* command to copy the file to your local system. If you want to copy multiple files, use the *mget* command followed by a file name containing wildcard characters. The wildcard characters are * and ?, where * stands for any or no characters in that position and ? stands for any single character. For example, "**mget *.exe**" would get copies of all of the executable files in the current directory.

```
IRBIS.LLNL.GOV>binary
Type: Image, Structure: File, Mode: Stream
IRBIS.LLNL.GOV>get fp-204a.zip
  To local file: fp-204a.zip
<Opening BINARY mode data connection for fp-204a.zip (269411 bytes).
<Transfer complete.
```

Closing FTP and Ending the Session

To close the connection, use the *close* command, and to close the session and quit ftp, use the *quit* command:

```
IRBIS.LLNL.GOV>quit
<Goodbye.
```

The file *fp-204a.zip* should now be on your local system. Again, if you download and use shareware programs from this or any system, be sure to follow the instructions for compensating the authors. The cost is minimal for the functionality you get.

A Few Final Words

The FELICIA and IRBIS information servers are supported by CIAC for the U.S. Department of Energy and its contractors. These information servers contain current computer security information and software for all computers, from desktop units through mainframes. Accessing this information is a relatively painless process once your system is correctly set up. This is especially true with modems and terminals, so get help if you are having problems. Once the setup is complete, connecting to FELICIA or IRBIS goes very quickly. With ftp, you can download files from IRBIS in a few seconds with a single command. Downloading from FELICIA is slower because the files must go over the telephone lines. If you're having problems, or suspect there is a problem with FELICIA or IRBIS, please contact CIAC at (510) 422-8193 commercial or FTS.

Appendix A

Modem Commands

Hayes commands that you may need to use are:

Command	Action
AT	Attention (wakes up the modem).
D	Dial the following number.
T	Use tones to dial the number (use P here if your telephone system is pulse-dialing only).
,	Pause 2 seconds.
L1	Speaker volume low.
L2	Speaker volume medium (default).
L3	Speaker volume high.
M0	Speaker off.
M1	Speaker on until carrier detect (default).
M2	Speaker on always.
Q0	Send responses to commands (default).
Q1	Don't send responses.
V0	Send responses as numbers.
V1	Send responses in words (default).
W	Pause for a second dial tone. Use this to pause for an outside line. When you are using a local PBX that requires an initial number (9, for example) to get an outside line, you need to pause until you get the dial tone before dialing your number.
Z	Reset the modem to the defaults.

Do not forget that you must always start a modem command with the **AT** command, though you can stack several modem commands on one line. For example, "**ATL1Q1V0**" sends the commands **L1**, **Q1**, and **V0** to the modem.

DATE FILMED

4/6/94

END