

The News Window and a News Item

These message boxes can be left on the display while you do other things so they can form a convenient on-line reference system.

5.15 Shell

The 'Shell' button will open a window that is connected to an AmigaDOS shell on the BBS machine. Within this window one can issue normal AmigaDOS commands and see their output displayed. Since the ability to issue AmigaDOS commands is potentially very dangerous⁴⁵ regular users will normally not be allowed to use this function, in which case clicking on the 'Shell' button will just result in a warning message explaining that you have insufficient privileges to use the shell. If you are a co-sysop with sufficient privilege to use the shell you will find that you can open as many as you need.

⁴⁵ A simple command such as 'format dh0:' could be disastrous.

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45 Butler Cr. N.W.,
Calgary, Alberta,
CANADA, T2L 1K4.

Voice: (403) 282-7990

BBS: (403) 284-2048 and (403) 284-5625
(24 hours, V.32bis and HST)

FidoNet: 1:134/92.0

Internet: svermeulen@ragnarok.mtroyal.ab.ca

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The two programs involved in a door are called the client and server. (So now you can say you've used a *client-server* architecture). The client always runs on the IceTERM end of the connection and the server always runs on the BBS end.

5.17.1 Installation

Installation of a door is quite simple, just drag the icon for the door client and drop it in the drawer where these are stored on your system. The directory where the door clients are stored is established with the 'DOORDIR' tool type.

5.17.2 Accessing a door

To use a door from IceTERM just click on the 'Doors' button and a door chooser will appear with a list of the doors to choose from. Click on the names of any doors you wish to use. Like any other IceTERM function⁴⁶ you can start up several copies of a door if you wish⁴⁷. Once the door has been started you can close the door chooser list, or leave it open to start other doors from. If you use the doors frequently you can even use the 'AUTOSTART' tool type (see Section 9.14.4 [Autostart], page 114) to automatically open the door chooser when you log into the BBS.

Note that sysops have the ability to control user access to the doors on a door by door basis, so even if you have the necessary client in your door directory you may find that you cannot use the door on certain BBS systems.

As a user of IceTERM you only need the client part of each door you want to be able to use. You *do not need* the server part, although the server part is usually distributed along with the client so that the sysop can install it on the BBS system.

Related topics: Section 4.22 [Doors do not appear], page 28 and Section 4.23 [Doors do not work], page 28.

5.17.3 The preview door

This is a door that has been written to allow you to preview miniaturized versions of IFF, GIF or JPEG pictures to help you decide what to download. When this door is started it brings up three windows which

⁴⁶ Except SIGs and email.

⁴⁷ Some doors may not allow this.

this poses a problem for non-Amiga users, an *ASCII interface* to the BBS is also available (and is not documented here).

The terminal program is copyrighted software; however, it is freely distributable, so all users of IceBBS systems can get a copy of it for free.

IceTERM will support most serial expansion boards and internal modems. The system has been tested with ASDG's dual serial board (at rates of up to 153.6K baud), Amigo Business Computers ComPorts 8 port card, Commodore's A2232 card, the Multiface card, GVP's IO Extender, and the Applied Engineering internal modem (get the most recent ROMs, earlier ROMs did not support multi-character IO).

Note that while IceTERM will work with the internal serial port, using this port at baud rates greater than 9600 baud is not recommended unless you are running with an accelerated Amiga (it does in fact work, but you will find multitasking to be sluggish at times). You will be much better off getting a serial expansion board (if you own an Amiga 2000 or 3000) and to use that instead of the internal serial port.

IceBBS has also been run with a variety of modems, including the Supra Modem 2400, Supra FAX Modem V.32bis, Packard Bell 2400, GVC 2400 with MNP, USR Dual Standard, USR Sportster (v32bis and v34), Zyxel, and some Motorola V.32 modems. It would be nice to hear how it runs with Telebit modems.

As for memory requirements, IceTERM is quite frugal although getting IceTERM to run on a 512K machine may be difficult now. It is possible to run low on memory by attempting to do too many things at once, or by selecting a large editor (such as a commercial word processor³) to edit messages with.

IceTERM runs under AmigaDOS 1.3 and 2.0. At the current time it uses some 2.0 specific functions, but only if it is running on an Amiga equipped with 2.0. I expect to see a continued gradual migration in this direction in future versions. At some point new versions of IceTERM will abandon 1.3 compatibility.

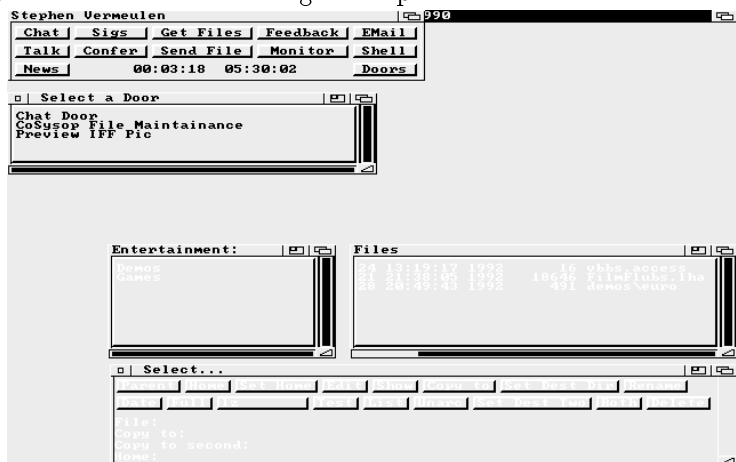
³ Then there's always Erik Petersen and his trusty A500 (1 meg version) who used WordPerfect as his editor.

colours in a mini-picture is entirely up to the sysop, I generally recommend reducing the picture size until it is 10K bytes or less and using the 64 colour EHB mode.

If you want to help out your local sysop try uploading miniaturized versions of any pictures you upload. You can make the miniatures with a tool such as Wasp, ADPro, or HamLabPlus.

5.17.4 The RemFile door

The ‘RemFile’ door is a tool intended for use by co-sysops to aid the main sysop with the chores of file system maintenance. It gives the co-sysops the ability to copy, delete, and test files. As well they can add descriptions and revise existing descriptions.



The Remote File Maintenance Tool

The ‘Parent’, ‘Date’ and ‘Full’ buttons function the same as those in the get files tool (see Section 5.9 [Get files], page 49). The ‘Home’ button is used in conjunction with the ‘Set Home’ button. By pressing the ‘Set Home’ button you tell the door to memorize the current directory and when the ‘Home’ button is pressed it returns you to this directory. This is most useful for returning to a frequently visited directory like the upload directory.

The ‘Show’ and ‘Edit’ buttons are used to view the long description of a file and to edit that long description. When the long description is to be edited your favourite editor is used (in the same way that the IceTERM program does it) so the ‘EDITOR’ tool type is needed in the doors’s icon (see Section 2.6 [Your Editor], page 8).

The RemFile door can also be used to copy, rename and delete files. These all work in a similar fashion, you first click on the name of the file that you want to work on and then click on the button named after the

2.3 Setting up IceTERM

First you must unpack the distribution archive. IceTERM is usually distributed in an ‘LZH’ format archive. Unpacking this type of archive is quite simple, just use ‘CD’ to go to the directory where the archive is located⁴ and type a command like:

```
lharc x IceTERMv119.LZH
```

Then to set up IceTERM you must drag it (by its icon) from the directory where the distribution archive was unpacked to the place you wish to keep it. At this point, if you are running a pre-2.0 version of AmigaDOS, you should also copy the ‘Arp.Library’ to your ‘LIBS:’ directory if you do not have ARP installed (see Section 2.2 [The ARP Library], page 3).

Next you need to edit the WorkBench tool types array for IceTERM. What’s a tool type array you ask? This is a much under-utilized feature of the Amiga’s WorkBench environment. To access it you single click on the IceTERM icon and then select the ‘Information...’ menu item from WorkBench’s ‘Icons’ menu (or ‘Info’ from WorkBench’s menu under AmigaDOS 1.3 and earlier). WorkBench will then open a window summarizing information about the icon⁵, and within that window is the string gadget⁶ you can use to edit the tool type array.

If you are running AmigaDOS 2.0 or higher you can install IceTERM by just dragging it’s icon to where you want to keep it. Then when you first double click it, IceTERM will prompt you for the additional configuration information it needs (such as user name and password). IceTERM distribution archives often contain additional icons for dialing specific BBS systems, these are project icons which have their default tool set to IceTERM. If you start IceTERM by double clicking one of these project icons any additional configuration information will be saved within in the project icon.

⁴ This example assumes that the archive is called: ‘IceTERMv119.LZH’ your copy might be called something else entirely.

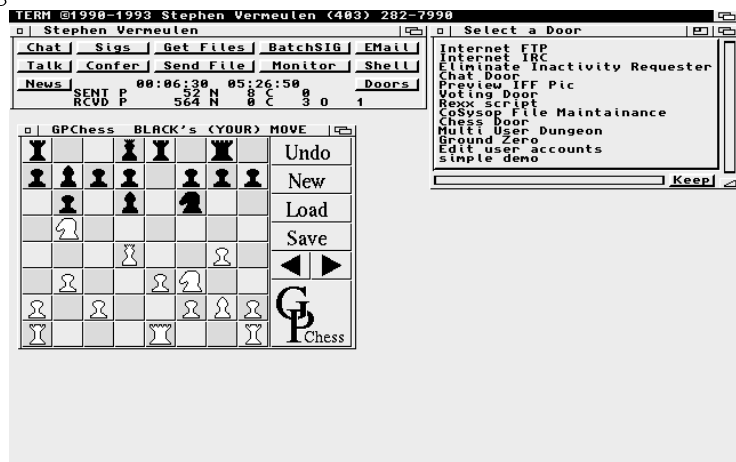
⁵ An icon represents a program, data file, disk or directory, so this information window really displays information about the program, data file, disk or directory.

⁶ A place you can type in some text, edit it, and then tell the Amiga to use it by hitting the return key.

The three buttons: 'Test', 'List' and 'Unarc' are used to tell the archiver what operation you wish to perform on the selected file. Not all archivers allow all operations to be performed. The 'Test' button runs the archiver's file test mode and displays the results of it in a window for you perusal. The 'List' button lists the contents of the archive. The 'Unarc' button tells the archiver to unpack the archive into a directory that the sysop has set aside for this purpose, once the archive is unpacked the results of the extraction will be displayed and you can then inspect individual files in the archive (perhaps even downloading them) with the get files tool.

5.17.5 GPChess door

This is a *play by mail* chess game simulator. It was written by Greg Pringle and the server is distributed as part of the full version of the IceBBS software. The chess game features a graphical chess board where you enter your moves complete with a history display feature, so you can review the past moves that led up to your grief. It also has some score logging.



The GPChess Door

If two users are both online at the same time they can make GPChess into a real-time game by both opening the conference and telling each other when they have completed their move.

5.17.6 Voting door

The voting door is the first of the new ARexx based doors for IceBBS. So in order to use it you must have ARexx installed and active on your system. If you are running AmigaDOS 2.0 or higher ARexx will be

ble modem this should be set to at least '9600' and if you have one of the more expensive V.32, V.32bis, HST, v.fast or v34⁹ modems you will probably want to use '19200' or '38400', some serial boards and modems will even support higher baud rates¹⁰. **Note that you should not use '14400' or '28800' as these are the modem's internal speeds, they are not speeds supported by the modem's serial port (and will not work, even if your serial board happens to support them),**

HANDSHAKE=

the handshaking you use between computer and modem, this should be set to one of 'none' or '7wire', if it is not present then the system defaults to 'none'. If you use a baud rate higher than '2400' you should use the '7wire' setting and you should pay attention to how your modem is set up,

EDITOR=

the editor you wish to use, this is the editor you will use to compose messages etc.,

MESSROOT=

the directory for downloaded messages, these messages can be read and replied to by the off-line reader 'IceOLR',

EMAILROOT=

the directory for email and user lists, do not put this in 'RAM:' as IceTERM will have to redownload some data each time you use it,

DOWNDIR=

the directory where your downloads will go, this may be overridden from within IceTERM if you want,

TEMPDIR=

the directory where temporary files will be made, this defaults to 'T:' which should be safe for most people,

KEEPFILE=

the name of the file to save useful messages in, put this on a floppy or hard drive so that the kept information is not lost when you reboot,

SCRIPT=

the name of the script file you want to run, this is optional in certain circumstances.

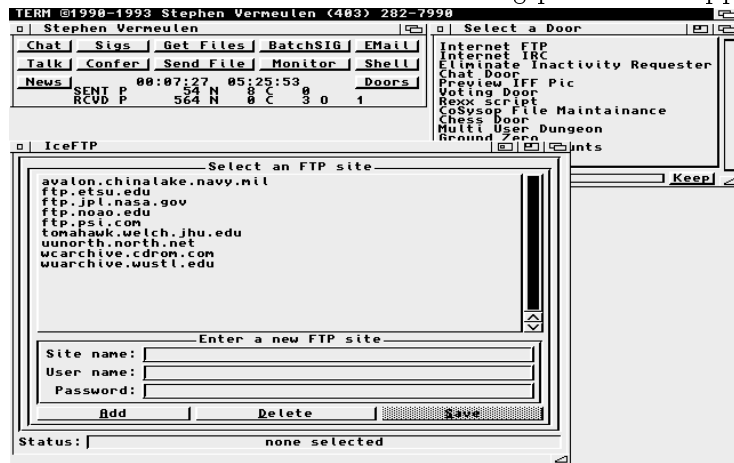
There are a number of additional tool types that may show up in the IceTERM icon, these are used to store initial size and position information of the various windows that IceTERM opens. The complete

⁹ At the time of writing these were not shipping, but they were expected to transfer upto about 30000 baud.

¹⁰ '57600' and '115200' baud are the most common very high speeds

5.17.7.2 Starting IceFTP

To start the FTP door just click on the ‘Internet FTP’ item in the list of Doors. A window much like the following picture will appear:



The IceFTP Door - Choosing a Site

5.17.7.3 Choosing an FTP site

The first thing you need to do is to select the FTP site you want to connect to. This is done by click on one of the ftp site names in the list at the top of the window. This list is initially loaded from the FTP sites file which you specify with the ‘SITELIST=’ tool type in the FTPclient’s icon. By default this is set up as:

```
SITELIST=FTP.sites
```

So to start with you just double click on the name of the site you want to visit.

If you want to add the name of other sites you can do so by entering the site name, user name (usually ‘anonymous’ or ‘ftp’) and password into the string gadgets below. Once these are entered you hit ‘Add’ to add the site to the list. If you want to save the list for future use you can hit the ‘Save’ button.

If the site accepts the user name ‘anonymous’ the password is not needed and can be left blank. If you have a private account you want to access then you can enter the appropriate username and password.

Note that the user name and password are stored in the ‘SITELIST’ file so be careful!

Now lets connect to a site double click on the name and the following might happen:

tool type is set in the IceTERM icon then IceTERM will use the default you have set up in the Amiga’s Serial Preferences¹⁴ editor.

There are two methods of handshaking that can be used with IceTERM, either ‘none’ or ‘7wire’¹⁵. The first (‘none’) is quite simple, if no handshaking is used then there is no way for the computer to tell the modem to slow down when its buffers get full (or visa versa). This is generally quite safe for 1200 and 2400 baud modems; however, it is *not* safe for MNP, v42, V.32, HST or higher speed modems. To disable handshaking use:

```
HANDSHAKE=none
```

There are some very old modems (usually 1200 baud modems) that do not support the ‘7wire’ mode of handshaking, for these you must use the ‘none’ mode.

The ‘7wire’ mode is usually to be preferred over ‘none’; however, there are some complications, you must have a serial cable that supports the additional wires (this is usually the case with prefabricated serial cables these days) and your modem will almost certainly need to be told to turn on the handshaking (look for commands relating to CTS/RTS or seven wire handshaking and see Chapter 3 [Modem settings], page 13). To enable handshaking set:

```
HANDSHAKE=7wire
```

If you have a modem that connects to your Amiga at 9600 baud or higher it is *essential* that the hardware handshaking is used.

2.6 Selecting your editor

The ‘EDITOR’ tool type is used to specify the name of the editor you want to use to edit the messages you are posting or replying to on a IceBBS system. This will default to the infamous ‘Ed’, simply because it is standard on every Amiga system. There are two possible problems you will encounter here, the first is that the editor you are using should be in your ‘C:’ directory. The second is that some editors (CygnumEd and Az are good examples) *detach* from the CLI they are run from. By this I mean they always appear to be started with a command line like ‘run az’ even if you just typed ‘az’. These editors can still be used so long as

¹⁴ Preferences will allow you to select among three types of handshaking: none, XON/XOFF and CTS/RTS. The CTS/RTS type is the same as ‘7wire’. The XON/XOFF type cannot be used by IceTERM. If XON/XOFF is specified IceTERM will ignore it and fall back to ‘none’.

¹⁵ Either ‘7wire’ or just ‘7’ can be used in the tool type

The clear downloads button will remove all the files you have selected from the list (as will changing the directory). You can also remove individual files by double clicking on them where they appear in the download list.

5.17.7.5 Downloading from an FTP site

When you are ready to download something you just hit the 'Download' button. This will cause the contents of the screen to change again to a download progress monitor.



The IceFTP Door - Downloading Files

This window has a list which shows the names and sizes of the files that are yet to be downloaded and a progress bar at the bottom that shows the progress through the current file.

Note that like other IceTERM functions you can use other IceTERM tools at the same time as the FTP client, in fact you can even use more than one FTP client at the same time (if you are browsing one site while downloading from another).

5.17.7.6 Tool types for IceFTP

The FTPclient takes two optional tool types in its icon:

SITELIST=filename

specifies the file that you want the site list to be loaded from and saved to,

DOWNDIR=dirname

specifies the directory you want downloads to go to, defaults to 'RAM:'.

2.7 The message bases

The 'MESSROOT' tool type is used to specify the name of a directory you want to use to store the messages you download from an IceBBS system with the BatchSIGs function. This directory will be used to store a lot of files, it should go on a disk where there is plenty of space. If you are using a floppy based system you might want to name the disk 'Messages' and then specify:

```
MESSROOT=Messages:
```

then IceTERM will prompt you to insert the 'Messages' disk whenever it is needed.

You should not store any other files within the directory specified by 'MESSROOT' as IceTERM and IceOLR read, write and delete lots of files in this directory.

2.8 Your mail box

The 'EMAILROOT' tool type is used to specify a directory where received email (electronic mail) and the user list for the BBS system is to be stored. For example:

```
EMAILROOT=dh2:vbbs/email
```

Note that you should *not* tell IceTERM that the 'MESSROOT' and 'EMAILROOT' are the same directory or even that one is in a subdirectory of the other as this can cause quite a bit of confusion.

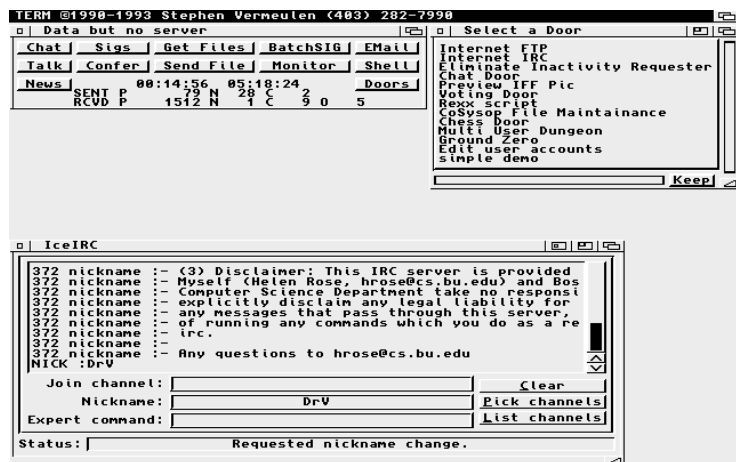
2.9 Optional tool types

The remaining four tool types are safely optional, but should probably still be set.

The 'DOWNDIR' tool type specifies the directory where your file downloads will go by default. This will default to 'RAM:'. If you have a small system you may want to change this to a disk based directory, and if you only have floppy disks you will probably want to set this to 'DownLoads:' and then name a few disks 'DownLoads'¹⁷—this way you will always have some free space to download to.

The 'TEMPDIR' tool type specifies the directory where temporary files will be made. These are created when you edit messages in the feedback and email tools of IceTERM, as well when you enter extended file descriptions for file uploads. This tool type will default to the AmigaDOS

¹⁷ When naming a disk you do not include the ':' character in the disk name, AmigaDOS will automatically include it for you.



The IceIRC Door - Picking a Server

The first thing you need to do is to select the IRC site you want to connect to. This is done by clicking on one of the IRC site names in the list at the top of the window. This list is initially loaded from the IRC sites file which you specify with the 'SITELIST=' tool type in the IRCclient's icon. By default this is set up as:

```
SITELIST=IRC.sites
```

So to start with you just double click on the name of the site you want to visit.

If you want to add the name of other sites you can do so by entering the site name, nick name, password and port number into the string gadgets below. Once these are entered you hit 'Add' to add the site to the list. If you want to save the list for future use you can hit the 'Save' button.

Most servers do not require you to enter a password (that's really for system operator type stuff), and you can make the nickname anything you want (9 characters maximum). The port number is also optional, this is a number like '6667' which is needed on some sites that run more than one server, or run the server connected to a non-standard port number.

Now lets connect to a site, double click on the name and the following might happen:

- the status line goes to 'Connecting...'
- then after a few seconds you get a 'Connection refused'

if this happens the site is probably busy and you should try some other time of day (many sites have restrictions during their office hours).

If you get a *Could not connect* type message that appears very quickly, it could mean that the BBS's link to the Internet is currently down.

2.11 Additional customization

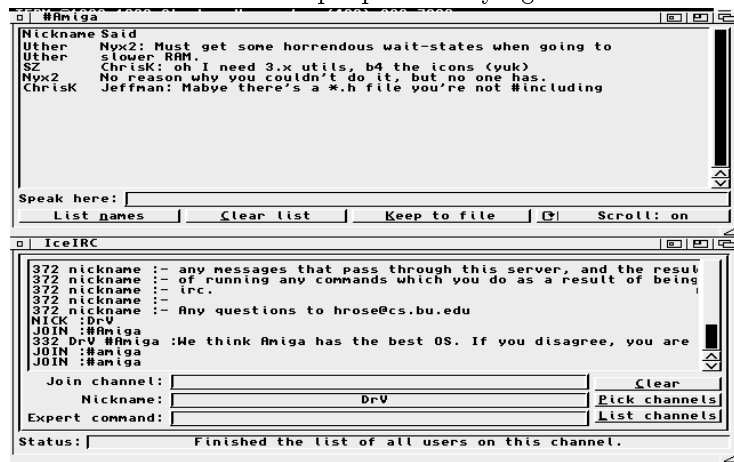
For more information on additional customization options available within IceTERM, see Section 9.1 [Tool types], page 105.

List channels

This asks the IRC server for a list of all the IRC channels that are currently available, since this list is quite long it might take a few minutes to complete. You can use this list to select channels to add to your *pick channels* list. Normally you won't have to use this button,

5.17.8.4 Talking in a channel

If you've joined a channel by double clicking on in the *Pick a Channel* window, or by typing the channel name into the 'Join Channel' string gadget another window will appear. This window has the name of the channel in its title bar and the majority of it is taken up by a scrolling list that contains what various people are saying on the channel.



The IceIRC Door - The Channel Window

At the bottom of the channel window is a string gadget where you enter what you want to say on the channel (up to about 500 characters).

Below this are four buttons:

List names

This gets the current list of who is on the channel,

Clear list

This clears the scrolling chat list,

Keep to file

This stores the contents of the chat list into a file (a file requester will appear to get the name of the file to use),

The 'ATW2' and 'ATS95=3' settings are non-standard but yield a more informative connection string.

3.3 Zyxel modems

Hopefully UUG or John Lees can fill in the blanks here.

AT&B1	fix the baud rate
AT&K4	Negotiate for V.42 or MNP4
AT&H3	Turn hardware flow control (CTS/RTS) on
AT&W	

3.4 GVC 2400 MNP modem

The GVC 2400 MNP was one of the earliest 2400 baud modems with MNP at a reasonable price.

AT%C1	
AT\J0	This is a rather unique setting
AT\N3	
AT\V1	
AT\Q3	
AT\G0	This is a rather unique setting
AT&W	

Then you should be able to setup IceTERM with the following tool types:

```
BAUD=9600
HANDSHAKE=7
```

3.5 USR Sportster v34

This is one of the least expensive external v34 modems. It is a pretty good performer, although its big brother the v34 Courier seems to more consistently connect at the maximum possible v34 speeds. This modem actually comes pre-configured for hardware flow control, so you just plug it in and set your IceTERM to:

```
BAUD=38400
HANDSHAKE=7
```

or perhaps to 'BAUD=57600' if your serial port will go that fast. If you experience problems getting IceTERM to complete the connection, or you get a lot of errors you might just do a factory reset of the modem, in case it had not been properly reset at the factory. Use the following commands to do this:

SITELIST=filename

specifies the file that you want the site list to be loaded from and saved to,

CHANLIST=filename

specifies the file that you want the pick a channel list to be loaded from and saved to.

5.17.9 Tool types for the door icons

When the door chooser is started it first scans the doors directory looking for files which have icons attached. It opens each icon in turn looking for ones with the appropriate tool types. These tool types are: 'STACK', 'PRIORITY', 'MENUNAME', 'SERVER' and 'AREXX'.

Door icons *must* have both the 'MENUNAME' and 'SERVER' tool types for the door client's name to be displayed in the chooser's list for selection by the user. The 'STACK' will default to 8000 bytes if not present and the 'PRIORITY' will default to 2 if not present.

'STACK' sets the number of bytes that the door client's stack will be set to when the door client process is spawned by the IceTERM package. 'PRIORITY' is the *communications channel* priority (not the AmigaDOS task priority) that the door's client and server will use to communicate. The priority is user selectable in case you decide that doors are more or less important than another BBS task. Setting the priority to zero (the minimum) will place the door at the same level as SIGs and file downloads, a priority of 5 is the maximum used within IceTERM (by the chat and confer functions).

The 'MENUNAME' is used by the user to specify the name of the door that will be displayed in the selection menu. You should set an informative string here (eg. *Multi User Dungeon, Abandon Hope All Ye Who Enter Here* etc.).

The 'SERVER' tool type is used by the sysop and user to define the name of the server that is to be launched on the BBS when this client is started. This allows the user and sysop to change the actual file names (in case there is a name conflict) while still allowing the correct server to be launched. Only the name of the door file on the BBS is needed here. If you downloaded a door from another BBS system it is a good idea to check with the sysop first to see what the correct door server name is.

The server icon will also include the 'ACCESS' tool type, the BBS checks for this tool type to determine which users are allowed to use the door. This tool type is not needed in a door client.

The 'AREXX' tool type is required on doors that are written in ARexx. This is how IceTERM and IceBBS recognise that these are ARexx doors.



The ASCII Mode Window

Either your modem cable probably is not passing the carrier detect (CD) line or the modem is not configured to send a carrier detect signal to the computer. Most modern serial cables are assembled with all the necessary pins wired straight through, older cables², especially those which appear to have missing pins, may not pass all the necessary signals. To test a cable is quite simple, but a little tricky for the novice, it is easiest to borrow a cable that is known to work and try it.

If you suspect the modem is the problem, the setting to check is usually the 'AT&C' command. The '&C0' generally tells the modem to always keep the carrier detect line on (regardless of whether there is a connection or not). The '&C1' command tells the modem to send the carrier detect only when there is a connection currently. Other modems may have a suppress carrier detect mode too.

4.4 The BBS hangs up on me

There is a possibility this can happen at any time due to the number of ways a phone call can be interrupted³, but typically it is a problem when a user is trying to log in. This problem is really two separate ones:

- First, if the BBS hangs up on you before the modems have fully connected it is nothing to worry about. A IceBBS system will reset the modems from time to time, and if you happen to dial in at just the right time this will happen to you. This will happen more often on a very busy BBS as the modem is reset after each user logs out. If this happens just wait a few seconds and redial.

² Often these might be custom or even homemade.

³ Call waiting and other people picking up the phone to make a call are examples

```
IceTERM demo_script -b9600 -h7
```

or equivalently:

```
IceTERM demo_script -b9600 -h7 -dserial.device -u0
```

will do the trick.

The `-s` switch tells IceTERM to open the serial port in shared access mode. This may be of use to people running programs like `Getty`.

The script file (see Chapter 8 [Script Files], page 99) is the name of a IceTERM script file to run to get yourself dialed in to the BBS, any command line parameter which does not start with a hyphen (`-`) character will be taken as the name of the script file to be used. Only one script file may be specified.

the serial line between your modem and the computer, or between the BBS and its modem it is possible for some data to get lost. When this happens the checksums will not match and the computers will drop the connection and this message will appear. If you are just starting to use the MNP or V.42 mode and you get these requesters you should check the serial cable, the handshaking setting (in the IceTERM icon) and the modem register settings that control handshaking. If you get this when doing file uploads then it is almost certain the problem is handshaking between your modem and computer.

Finally, check the version of your `serial.device` the older 1.3 and 1.2 devices did have some problems that may cause data loss (perhaps through poorer handshaking). The most up-to-date device for AmigaDOS 1.3 (or 1.2) is the one that came with the 1.3.2 update, it contains a version number of 34.12 and a date stamp of 27 Mar 1989. With AmigaDOS 2.0 or higher you can use the `version` command:

```
version serial.device full
```

With AmigaDOS 1.3 or earlier you can check your device by issuing the CLI command:

```
type devs:serial.device opt h
```

and then looking for a date and version number near the beginning of the output⁸. When diagnosing this you might want to drop back to 2400 baud and see if troubles go away.

4.6 In MNP mode IceTERM stops working

If you are using an MNP capable modem (in particular the GVC 2400 MNP) and cannot use IceTERM once the connection process is complete and the control window says you are `Logged in`, then take a look at your modem settings – you should set it to `AT\G0`⁹.

4.7 Garbage in the window

Upon typing commands into the ASCII mode window all you get is garbage.

When this happens it is probably because of a baud rate mismatch between the computer and the modem. Note that IceTERM gets its baud rate from several places. First it picks up whatever the default preferences baud rate is. Next it looks in the tool types array of the

⁸ Of course AmigaDOS 2.0 has a better serial device.

⁹ This was the Al K. problem, we still do not know how his modem ever got set incorrectly.

settings], page 13) between your modem and serial port. There are two modes available: either ‘-hn’ (no handshaking¹²) ‘-h7’ (RTS/CTS handshake, 7 wire mode¹³). It should not matter which you choose, except that if you are running a newer modem where the serial rate can be higher than the modem’s phone line rate then you *must* use the 7 wire mode. It is strongly recommended that you use ‘7wire’ mode whenever your baud rate exceeds 2400.

The ‘LINK’ tool type can be very useful in diagnosing and fixing serial communications problems, see Section 9.25 [Serial port], page 119.

Some hard drive controller cards can cause interference with the Amiga’s internal serial port. Normally what happens is that the hard disk transfers take over the Amiga’s bus for a long enough time that a serial port interrupt gets serviced too late. This causes loss of a character or characters. This symptoms of this problem are that downloads to the RAM disk or to floppies seem to work fine, but downloads to a hard drive partition take much longer. If the ‘LINK’ tool type is set you will see lots of NAK (N-type) packets being generated. The GVP "Combo boards", which combine memory expansion, an '030 chip and a SCSI controller on one card are notorious for this. There is a program called ‘GVPPatch’ that will help fix the problem. I have had reports of a similar problem happening in a system that has an ICD Trifecta controller and an RCS'040 board.

NOTE: since the IceTERM to IceBBS link uses a full 8-bit binary connection you cannot select the serial port’s XON XOFF handshaking. If you do select this via the Amiga’s Preferences, IceTERM will default to no handshaking.

4.9 Problems posting messages

4.9.1 No editor appears

Sometimes a user will be able to read messages with the feedback tool (this can also happen with email and IceOLR), but when she hits the ‘P’ (for post) or ‘R’ (for reply) keys nothing appears to happen. This can be caused by a number of things:

- by not editing the ‘EDITOR’ line in the IceTERM icon’s tool type array,
- by not running IceTERM with enough stack space. Try the CLI command:

¹² From the WorkBench set the ‘HANDSHAKE=none’ tool type.

¹³ From the WorkBench set ‘HANDSHAKE=7wire’ in the IceTERM icon.

then execution will continue following the label. You may have as many labels as you like, labels may be any combinations of ASCII characters which do not make up one of the above reserved command words. Labels may appear anywhere between two commands,

`wait` STRING

The ‘`wait`’ command causes execution of the script to pause until the desired ‘STRING’ is received from the serial port or another string that triggers an exception is received. Typically this is used to detect a specific modem response before sending more commands, often a ‘`wait OK`’ command is used. A common script file error is to use a ‘`delay`’ command rather than a ‘`wait`’ command.

`on` STRING LABEL

The ‘`on`’ command is used to add a new exception string to the list of strings which, when received from the serial port, will cause an immediate jump to the specified label. You may have as many exception strings active as you wish. Specifying the same string a second time will erase the first specification allowing you to change the branch label (note that the actual labels can only appear at one place in the file),

`name` STRING

The ‘`name`’ command allows you to specify a different user name in different parts of the script file, this allows you to log onto different BBS systems with different user names from the same script file. For this to work correctly you need to place the correct user name command just prior to dialing the number of the BBS,

`password` STRING

The ‘`password`’ command allows you to specify a different password in different parts of the script file, this allows you to log onto different BBS systems with different passwords from the same script file. For this to work correctly you need to place the correct password command just prior to dialing the number of the BBS,

`exit`

The ‘`exit`’ command is used to terminate the script file and put the IceTERM program into its listen for auto-connect sequence mode,

`beep`

The ‘`beep`’ command is used to cause the Amiga to issue a beeping sound, this is useful to alert yourself to a successful connection or some other problem,

some editors have a *save and exit* function which should also work with IceTERM.

4.9.3 Duplicate postings keep appearing

These are usually the result of a user using an editor that detaches from the CLI and not saving his message before clicking on the posting message requester. Essentially, this is a result of the previous problem.

4.10 How do I log in under my own name?

Simple! Just edit the tool types in the IceTERM icon. There is an entry called ‘USER’ for your name and ‘PASSWORD’ for your password (see Section 9.24 [Name and password], page 118). Note: you do not have to save the password in the icon, if you do not include it then IceTERM will ask you to enter it whenever you start IceTERM.

4.11 How do I log in with different names?

Typically this problem arises when a user wants to connect with several different BBS systems each running IceBBS software. He may wish to use the same name on each BBS, but with different passwords, he may even wish to have a different name and password on each system, or he may have several accounts on the same system.

There are three ways of doing this, they differ mainly in how you connect to those BBS systems:

- the easiest (and most wasteful) is to just duplicate IceTERM (along with its icon) so you have one copy per BBS¹⁵ and then put the appropriate name and password in each icon. To do this just click on the IceTERM icon and select the “copy” function from the Work-Bench menu,
- the next is to put separate *project* icons in the same directory as the IceTERM *tool* icon and in these icons put the individual names and passwords (see Section 9.24 [Name and password], page 118). Then to log onto a particular BBS just double click on the correct icon. This is a nice method because IceTERM will store any snapshot information you make in the *project* icon from which it was started so you can make a fully custom environment for each BBS,

¹⁵ Of course each copy of IceTERM must have a different name or be placed in a different drawer.

time out at a later point in the script then it will reinitialize the count down to the new time out value.

8.3 Running scripts

A script may be automatically run when IceTERM is started either from the CLI or from an icon. In the tool icon use the 'SCRIPT' tool type to specify the name of the script file you want IceTERM to run. From the CLI you specify the name of the script file somewhere on the the command line. If IceTERM is started from a project icon no 'SCRIPT' tool type is necessary as IceTERM will use the name of the project icon's file as the script file to be run.

8.4 Script examples

Here is a brief autodial sequence that will redial one phone number until it gets through:

```
;add any special modem initialization in this
;section.
;
send ATX6      ;extended result codes on a USB modem
cr
wait OK

;now define what the script file is to do when the
;modem sends us one of CONNECT, BUSY or NOCARRIER
;
on CONNECT startproto
on BUSY redial
on NOCARRIER redial

;dial the number and then wait for 10 seconds before
;trying again
;
redial

send ATZ
cr
wait OK
send ATDP2842048
cr
delay 100      ;10 seconds delay
goto redial
```

modems can be set to ignore this line, and/or your serial cable may not pass this line. If your modem is ignoring the line you may wish to send it an 'AT&D3' command before starting up IceTERM. You can make this setting permanent by issuing an 'AT&W' command. Note: some people do not like to use the 'AT&D3' setting as they like to hop from one terminal package to another without the modem hanging up the connection.

There is another possible cause of this problem: faulty serial port software. There is a known problem with the Commodore A2232 multi-port serial card that prevents it from doing a hardware hangup of the modem. Contact your dealer to see about getting the more recent version of the serial device driver that fixes this problem.

4.15 I get very slow file transfers

See the notes in Section 4.8 [Line noise], page 21 and Section 9.25 [Serial port], page 119, this can be a symptom of poor phone line conditions or handshaking mismatches. To help diagnose this you might want to enable the link diagnostics, see Section 9.26 [LINK], page 120 for information.

Additionally, check to see that you are not doing something terribly CPU intensive (such as running 'Lharc', 'LZ' or a ray tracer¹⁸) as these will steal lots of CPU. Also, if this happens a lot and you are running IceTERM on a 8 or 16 colour screen reduce it to 2 or 4 colours and see if the problem stops.

This symptom may also be present when the BBS is particularly busy. For example, if many users are on-line at one time and downloading files, the BBS system may not respond as quickly to each user. As well, if the BBS is processing an incoming package of FidoNet or USENET mail, this may cause decreased performance.

4.16 Internal modem problems

There are a number of possible problems that can arise when using an internal modem (that is a modem that is on a board that is installed in an A2000, A3000 or A4000 card slot).

4.16.1 Applied Engineering internal modem will not respond

On early versions of this internal modem you need to send an 'ATC1' command to the modem to get it to respond.

¹⁸ AutoCLI is known to do this as well as some CPU monitors.

Bench – remove the line in your startup-sequence which says ‘resident Shell-Seg’ or else run IceTERM from the CLI. I believe this bug has been fixed.

4.20 IceTERM does not respond once logged in

If you are using an MNP capable modem and cannot use IceTERM once the connection process is complete and the control window says you are ‘Logged In’, then take a look at your modem settings you should set ‘AT\GO’²¹. (This was the Al K. problem).

4.21 My Packard Bell modem does not dial

On some modems it seems that the ‘`crlf`’ command in the script file (which sends a carriage return line feed pair) confuses the modem. The solution to this is to replace all ‘`crlf`’ commands with either ‘`cr`’ or ‘`char 13`’ commands (which will just send a carriage return).

4.22 My doors do not appear

If you do not see all the doors you have placed in your ‘DOORDIR’ directory listed in the door chooser there are several possibilities:

- You have not copied *both* the door client *and* its icon to the directory. IceTERM looks at the icon to determine if a program that has been placed in the door directory can be used as a door,
- You may have placed a server in the directory as well. Servers are used only by the BBS, they are often distributed as part of the door package so sysops receive compatible versions of both the client and the server,
- The missing door may not be a IceTERM door. Other BBS systems have doors too, none of these can currently be used with IceBBS or IceTERM.

4.23 My doors do not work

If nothing happens when you select a door from the door chooser there are four possible explanations:

- You might not have some necessary piece of support software installed that the door requires to run. For example an ARexx door requires that you have ARexx installed,

²¹ This may only apply to the GVC MNP 2400 modem.

first in the current directory, then it will look in the ‘S:’ directory and then it will look in the ‘C:’ directory⁷.

9.4 Tool type rules

The keyword part⁸ of a tool type should appear in uppercase. This is not a strict requirement since *all* of IceTERM’s tool types processing is case-insensitive⁹; however, the *Amiga User Interface Style Guide* insists that case sensitivity is the proper way.

Also note that there should generally be *no spaces* between the tool type name, the equals sign and the parameter. If spaces are included either the tool type will not be recognized or the parameter will include the space at the start of it. You can include spaces within the parameter itself if it is appropriate to do so (for example between your first and last name in the ‘user’ tool type); however, spaces in file and directory names are just a very good way of making your life unpleasant. Tool types should be kept short, generally about 60 characters is a good upper limit.

Also note that tool types can appear in any order; however, if a tool type appears twice the last of the two will override the first¹⁰.

Tool types can be used to specify a number of different things. These include directory names, file names, window sizes and positions, and even the state of some of the buttons.

Tool types which take file names expect to be given a full AmigaDOS file name, you should include the drive in this too, like:

```
KEEPFILE=dh1:t/keepfile.txt
```

It is possible to use relative paths in the directory part of the name if you know what you are doing.

Tool types which take directory names expect to be given a full AmigaDOS directory name, you should include the drive in this too, like:

```
TEMPDIR=dh1:t
```

⁷ The reason for all this searching is that CLI users generally do not like icon files cluttering their directories, so this allows them to hide the icons away somewhere they don’t often look at.

⁸ This is the word to the left of the equals sign.

⁹ IceTERM used to be case sensitive but far too many users got confused, so it was made to ignore the case of letters and there have been no complaints since.

¹⁰ Except in the case of the ‘PALETTE’ tool type.

This is because IceBBS is still sending data to a window (the server) which no longer exists.

This is an informative or diagnostic message and is not a cause for any alarm.

9.5 Commenting out tool types

If you wish to comment out a tool type so that it does not take effect you can do so quite simply by just placing a character like a semi-colon (;) or an 'x' in front of the tool type. This changes the tool type to something that IceTERM does not recognize so you don't have to delete and re-enter tool types while testing things out. Commodore recommends placing the whole tool type and value within brackets, for example:

```
(SWIDTH=656)
```

9.6 The snapshot menu

When you use the snapshot menu (see Section 5.2 [The main buttons], page 32) that is attached to most of the tools in IceTERM you may observe considerable disk activity taking place. What is happening is that IceTERM is updating the tool types pertaining to the window whose menu you just used. These tool types are written into the icon that IceTERM was started from. Older versions of IceTERM did not update the tool types that already existed in the icon, they always added fresh tool types to the end of the icon's tool type array. This could lead to a lot of tool types indeed. The new versions of IceTERM update the tool types, but they stop scanning with the first match they find. This can lead to a situation where if there are duplicate tool types in the icon (perhaps from running older versions of IceTERM) it appears that IceTERM is not updating the icon, or if it is, it appears that the updates are being ignored. The solution is to delete the second and later copies of all tool types in the icon.

Note that if the icon is currently visible on the WorkBench there may be a conflict between IceTERM and the WorkBench, see Section 4.24 [Problems snapshotting], page 29. Another problem that may arise is that under older versions of AmigaDOS multiple tool types can get joined together, see Section 9.27 [Tooltype bugs], page 121.

9.7 Window positioning

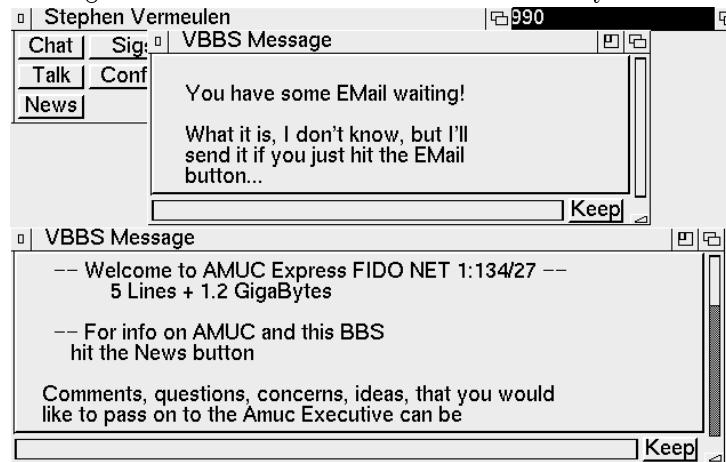
A number of the following tool types are configuration entries which the terminal program will save to the icon file whenever the user selects the 'Snapshot' menu item (see Section 9.6 [The snapshot menu], page 108). There are two kinds of these entries, ones which allow the initial position and size of the window to be saved and restored and a number of customization items which record the user's preferred button

5.2 The main buttons

The twelve main BBS functions available through IceTERM are accessed through the buttons in this window. There is also a menu bar connected to the main control window which is used to exit the IceTERM program, provides menu equivalents for some of the buttons and also provides the snapshot function (see Section 9.6 [The snapshot menu], page 108). Most of the other control windows (see Section 9.7 [Window positioning], page 108) in IceTERM also have the snapshot menu item. This item is used to save the position and size (where applicable) of the window along with the state of any toggle buttons, multi-state buttons and some of the string requesters in the window that it is attached to. This information is saved in the icon from which IceTERM was started¹ and will be reloaded the next time you start IceTERM from that icon.

5.3 Text windows

When IceTERM connects to the BBS an additional window will usually appear, this is a scrolling text window which will display the sysop's message of the day. An additional, similar window will appear to inform you of waiting email if there is some on the BBS for you.



The Message of the Day and Email Announcement

Whenever a window of this type shows up on your screen (the BBS uses them for a number of things) it is always controlled in the same way. There are two sliders with which you can scroll up and down, left and right through the message. The window is also re-sizable. When you are done with the contents of the window just hit the close button.

¹ The icon that was double clicked, either a tool or project icon.

by three characters from the set: '0', '1', '2', ... '9', 'A', 'B', 'C', 'D', 'E', 'F'. These represent the numbers zero through to 15, and these are taken as being the brightness of the three colours (red, green and blue) that make up the video display. If the colour: '000' is specified then black will be used, if 'FFF' is selected then the result is white, and '060' will be a dark green. For example:

```
PALETTE=AAA
PALETTE=000
PALETTE=FFF
PALETTE=679
```

will give you a custom screen with the same colours as 2.0 uses¹⁴. Note each subsequent palette entry *appends* to the palette definition table, this is *unlike* other tool types where subsequent ones completely overrode the previous ones. Because of this, if you have a 4 colour screen and you have 4 palette entries in the TOOL icon for IceTERM then any additional palette entries that you define in a PROJECT icon will appear to be ignored. They are not really ignored, but they are just defining colours 5–8 which you cannot see on a 4 colour screen.

9.8.3 Alternate fonts

IceTERM can use different fonts for its displays, it can use both fixed width and proportionally spaced fonts (although fixed width are usually to be preferred¹⁵). With the 'FONT' tool type set you can specify a different font to be used by name. For example to use the pearl font specify:

```
FONT=pearl.font
```

To specify the size of the font you use the 'FONTSIZE' tool type. If you have installed AmigaDOS 2.0 you are not limited to specifying only the font sizes that exist on your system. The new font routines are able to scale *any* font to the size you desire. As this scaling takes some time the 'Fountain' tool is provided as part of the new WorkBench so that you can make new sizes once and save them to disk. To load the CGTimes font at a 15 point size you would specify:

```
FONT=CGTimes.font
FONTSIZE=15
```

¹⁴ Craig Lever suggested a palette of 000, AA9, F70, 008.

¹⁵ Using proportional fonts can mess up the displays in the chat, talk, feedback and conference tools.

window² and then each person claims a window for his own. The really nice thing about chat windows is that they may be left open while you attempt to do something, allowing the sysop to provide true on-line help without interfering with the flow of events. Note if you are downloading files at the same time as chatting you will find that it takes longer to send what you are typing.

The talk function differs from the chat function in that whatever is typed into the window at one end of the connection is *spoken* by the Amiga's speech synthesizer at both ends of the connection. Note that this function works both ways: you can page the sysop and the sysop can page you, so do not be surprised³ if sometime late one night (say on a full moon) your Amiga suddenly starts talking to you...

For the talk function to work you must have the narrator device and translator libraries installed on your system (see Section 4.12 [Talk window closes], page 25), if either is not installed then the window will quickly close.

5.6 SIGs

There are two buttons ('Sigs' and 'BatchSIG') that access the SIGs⁴ subsystem within IceBBS. With the SIG tools one can read messages, post new messages (perhaps asking for help) and reply to messages (perhaps providing advice) in any of the SIG areas that are being carried on the IceBBS systems you call. Note that these SIGs can either be local only to a particular BBS or may be broadcast around the world either through FidoNet or USENET. The IceBBS support software enables a sysop to configure FidoNet and USENET areas as being read only⁵ or fully read write.

The 'Sigs' button activates the on-line reader, so named as it allows one to read the SIGs directly while connected to the BBS. Since reading

² Since IceTERM and IceBBS allow you to do several things at once this is easy and natural to do.

³ I did this to one of my users (Sheldon Maloff) who I had noticed had been idle for a while, it turns out he was working on a backup program at the time and had forgotten IceTERM was running in the background. The truly surprising part of it was that his backup program was designed to use the speech system to prompt him to change disks, and then suddenly it just started talking to him...

⁴ The term *SIG* is an abbreviation for special interest group, which in the computer world is not a political lobby group, but rather a group of people who share a common interest and wish to discuss it.

⁵ If the sysop does this postings may still be made to the SIG but they will remain local to the BBS.

9.12 Task priority

For those who like to run IceTERM from the WorkBench along with something that consumes a lot of CPU (like a ray tracer) the 'PRIORITY' tool type can be used to run IceTERM at a priority higher than the WorkBench normally will do (see Section 11.1 [Multitasking], page 125). Generally setting this to '3' will be sufficient. For example:

```
PRIORITY=3
```

9.13 Directories

The following tool types are used to specify the names of directories that IceTERM should use for certain purposes. It is recommended that each of these be set to a *different* directory and that these directories not be used for any other purpose (as IceTERM may wish to delete files in these directories from time to time).

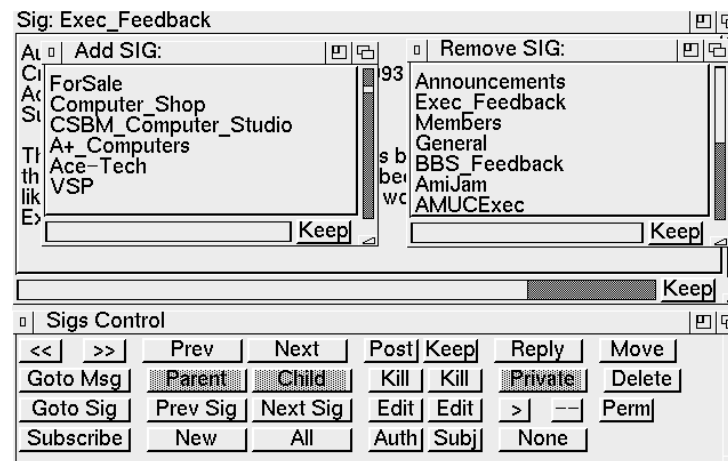
'MESSROOT' This is used to specify a directory where you want the batch SIGs tool to download the messages bases to. If this tool type does not exist when the SIGs tool is started IceTERM will prompt you for a directory. This directory is used both by the on-line SIGs tool and by OLR (see Section 5.7 [Batch SIGs], page 44), the off-line reading, replying and posting system, so you will need to create this directory on a disk with some free space. The directory should exist before you start IceTERM (and hit either the 'Sigs' see Section 5.6 [SIGs], page 34 or 'BatchSIG' buttons see Section 5.7 [Batch SIGs], page 44) and you should *not* store anything else in this directory.

'EMAILROOT' This is used specify a directory where you want any email (see Section 5.13 [EMail], page 65) that is sent to you to be saved and where the user list (see Section 5.13.1 [The user list], page 66) is also to be saved between IceTERM sessions (so you don't have to keep downloading it). Again this directory should exist before you start using email.

'DOWNDIR' This is used to specify a directory where you want any files you download to be put.

'TEMPDIR' This is where IceTERM will store a number of different temporary files it creates from time to time, typically files for use with your editor. To speed things you might assign this to 'T:' or perhaps 'RAM:'.

'DOORDIR' This is the directory where the client side of IceBBS doors (see Section 5.17 [Doors], page 77) are to be searched for. When the user clicks on the 'Doors' button IceTERM will scan this directory and display a list of the available doors for the user to pick from. Note



Subscribing to SIGs

In one window is a list of all the SIGs that are available on this BBS, in the other is the list of SIGs that you are currently subscribed to. By clicking on the SIG names you can add new SIGs to your subscription list and remove unwanted ones from it. When you have finished changing your subscription click on the close window gadget of one of the SIG list windows and a confirmation requester will appear to check that you want to save the changes.

5.6.2 All or subscribed

Once you have subscribed to the SIGs you wish to read you can read just those SIGs by making sure the subscription mode button says 'Sub' instead of 'All'. When this button is set to 'All' the SIG reader will cycle through all the SIGs that are on the BBS. The state of this button can be saved for future sessions by snapshotting (see Section 9.7 [Window positioning], page 108) the window.

5.6.3 Reading new messages

Reading messages is generally accomplished by using the two buttons marked: '<<' and '>>', which take you to the previous and next message (respectively) in the chronological order of posting. Note that these, and the other buttons, can be bound to keyboard equivalents of your choice⁶. Normally one clicks on the '>>' button to read all the new postings in a SIG, when the last message has been read the next click on the '>>' button will take you to the next SIG. Which SIG this is depends on whether you are in the read all SIGs (the 'All' button) or read only

⁶ Currently available only in the OLR.

while the editor is active on IceTERM's screen you change screens to the WorkBench screen and start clicking on drawer icons. If the IceTERM screen is still the front most screen you will find the WorkBench drawers opening on it instead of on the WorkBench. This may also happen with programs you start while the editor is running. Neither of these is dangerous *unless* you close IceTERM before you close all the stray windows on it's screen. See also Section 4.9.3 [Message problems], page 24.

9.14.4 Autostart

The 'AUTOSTART' tool type is used to automatically start up some of IceTERM's functions as soon as you log in. For example you might add:

```
AUTOSTART=batch
AUTOSTART=feedback
```

and then IceTERM will automatically start scanning the SIGs and downloading feedback as soon as you connect.

If you are a CLI user then you need to locate your IceTERM icon (where ever you have hidden it) and then by adding the 'AUTOSTART=batch' you can do an autologin, SIG scan and logout by waiting for the idle timeout.

All twelve main control panel buttons can be specified. They are:

- 'chat' to open a chat window,
- 'talk' to open a talk window,
- 'news' to open the news window,
- 'sigs' to start the on-line SIG reader,
- 'batch' to start the batch SIG downloader,
- 'email' to open the email tool,
- 'feedback' to start reading feedback,
- 'get' to start the get files directory browser,
- 'send' to prepare to send a file,
- 'doors' to open the doors selector,
- 'shell' to open an AmigaDOS shell on the BBS,
- 'confer' to start the conference tool,
- 'monitor' to start the activity monitor.

Note that all of these can be abbreviated to the first two letters and none are case sensitive.

Now what happens when someone replies to a message that is itself a reply? In this case the new reply is entered as a *child* of the original reply. So when you are reading the original reply you will find that *both* its 'Parent' (which takes you to the original posting) and its 'Child' buttons are unghosted. Now, if you click on the 'Child' button you will be taken to the first reply (possibly the first of a chain of replies) to this message (which itself is a reply). At this lower level the 'Parent' buttons take you back to the original reply.

The buttons in the control panel ghost and unghost as you select different messages to read. The states of these buttons act as extra visual clues about the message. For example:

- If the 'Parent' button is ghosted it means that this message is not a reply to any other message, since it has no parent. This means that it is either an original posting or it is a reply to a message that has since been removed from the BBS⁹,
- If the 'Parent' button is not ghosted it means that this message is a reply to some other message on the BBS. If there are any other messages that are replies to this same message then you can read them too by using the 'Next' and 'Prev' buttons,
- If the 'Child' button is ghosted then there are no replies to this message,
- If the 'Child' button is not ghosted then there are replies to this message and you can read the first of them by clicking on the 'Child' button and any additional replies can then be read by using the 'Next' and 'Prev' buttons.

Feel free to browse the history behind interesting messages by backing up to them by either using the 'Parent' or 'Prev' buttons as appropriate. When you have obtained the information you needed you can resume reading new messages by pressing the '>>' button. This system was designed to allow a free mixture of threaded and sequential reading to increase the usefulness of a BBS as a message exchange system. Additional features like the ability to mark key messages as permanent, delete junk messages and to search for keywords also serve to further this goal.

⁹ Every so often the BBS trims the message bases by removing old messages and ones that have been deleted by the moderators, when a root posting is removed any replies to it become orphaned and are thus elevated to posting status (that is they are linked into the backbone chain of the SIG and their parent buttons will be ghosted).

GETFILE_YMD

The status of the date style button (brief 'YMD' or 'Full' format) in the get files tool,

GETFILE_VERBOSE

The status of the short description control button (the '?' button) in the get files tool.

BUFFERS

Older versions of IceTERM used to write the received data to disk in 200 byte chunks, by default the new IceTERM will write it in 1024 byte (1K) chunks. This speeds up downloads (especially to floppies) on unaccelerated machines. The tool type 'BUFFERS' can be used to customize the buffer size. To get the buffer size of older IceTERMs you include the tooltype:

```
BUFFERS=0
```

To get a 4096 byte buffer (4K) you use:

```
BUFFERS=3840
```

as $3840+256 = 4096$.

On my machine (A2000 equipped with a 33MHz 68040) I can download to *floppy* disk at up to 4142 bytes per second with a 4K buffer size using a ComSpec serial port set to 57600 baud. Downloading to 'RAM:' runs at about 4418 bytes per second. On a non-accelerated Amiga the improvement in floppy speeds (or even downloading to hard drive) at high serial port rates (especially on the internal serial port) should be more dramatic.

9.17 Monitor tool

The following tool types are used by the monitor tool:

MON_BTNS The window that holds the buttons for the monitor tool,

MON_LIST The window that holds the list of events that the monitor tool is displaying,

MON_STATS The BBS statistics window, this displays the BBS up time and the list of lines and who is on them,

MON_BELL The status of the 'Bell' button that enables or disables the paging bell in the monitor tool,

MON_FLASH The status of the 'Flash' button that enables or disables the paging screen flash in the monitor tool.

full message itself and the subject and author lines. To use this feature you hit the 'Search' button and a text string entry gadget will appear. Type the string of characters or even a phrase you want to search for and hit return. Now the search text has been set you can search for a message containing that text, either previous to the currently displayed message by clicking on the '<' button or posted after the current message by clicking on the '>' button. Clicking on these buttons a second time will move you to the second message in which the search string occurs, and so on.

This search facility can also be used to search a SIG for messages addressed to you, just enter your name in the search string and find yourself.

5.6.6 The high message counter

There is a button that selects between 'New' and 'Manual'. In practice this is seldom used, in fact its only real use is when you quickly want to set your high read mark pointer (the counter that tells the BBS what the most recent message you have read in a SIG is) manually to skip over a bunch of messages. To do this you set the button to 'Manual' mode and then use the 'Prev' or 'Next' buttons to go to the end of the SIG (or better yet use the 'Goto Msg' button to select today's date and goto it). If the gadget is set to the 'New' position then only the '>>' button will affect the high read mark location. This is so that if you happen to follow an interesting thread of replies *forward* in time, while reading new messages, you don't skip over any new messages that do not happen to be in that thread. Sound confusing? Don't fret, just leave the button set to the 'New' position all the time and all will be well.

5.6.7 Posting a message

To post a new message of your own into a SIG all you need do is to click on the 'Post' button. When this is done IceTERM will start up the editor you have specified with the 'EDITOR' tool type (see Section 2.6 [Your Editor], page 8). You enter the text of your message into the editor and when you are done you save the file (IceTERM has already given it a name) and exit from the editor. A requester will now appear on IceTERM's screen asking you if you really want to post this message, and if you still do, click on the 'Yes' button. IceTERM will then proceed to ask you for the subject of your posting and the name of the person it is addressed to. Once these questions have been answered the message will be sent to the BBS and entered into the current SIG as the most recent message.

NSMOVE_LIST

The window that displays the list of SIGs for a moderator to pick where to move a message to.

9.19 Batch SIGs tool

The ‘**BATCHWINDOW**’ is used to set the size and position of the window which displays the batch SIGs tool’s control panel.

9.20 Feedback tool

The ‘**SIGWINDOW**’ tool type is used to set the size and position of the window that displays the feedback messages for the user to read.

9.21 Chat tool

The ‘**CHATWINDOW**’ tool type is used to set the size and position of the chat window.

9.22 Talk tool

The ‘**TALKWINDOW**’ tool type is used to set the size and position of the speech window.

9.23 The control window

The ‘**CONTROLWINDOW**’ tool type is used to set the size and position of the main control panel for IceTERM.

9.24 User and password

The ‘**USER**’ and ‘**PASSWORD**’ entries are used to specify your user name and password. The IceTERM program will automatically send these to the BBS when you connect to it and log you in. If you do not already have an account, the BBS will create one for you. Both of these entries are limited to 63 characters¹⁷ and capitilization is not important—that is, ‘**Fred**’ is the same as ‘**fred**’. Spaces are important and the length of

¹⁷ If you plan to use FidoNet email you should limit your name to 30 characters or less.

written by Kevin Huculak¹⁰ and it is freely distributable. From Kevin’s documentation:

IceIQle can generate completely customizable taglines and signatures with any Off-Line based message reader that uses an external text editor, AND in conjunction with the IceTERM BBS software, Copyright 1993 Stephen Vermeulen or AmiQWK, also provides header strings and initialed quoting with paragraph wordwrap. Initialed quoting is of the form:

KH> Original Message

It also works with IceTERM when quoting EMail and SIGS messages On-Line.

The customized header strings, tag lines and signatures can be read randomly or sequentially from a text file of your favorites.

5.6.10 Changing SIGs

From time to time you will want to change the SIG you are reading. The on-line reader does this for you automatically when you reach the end of new messages and hit the ‘>>’ button a second time. In this case it switches to the next SIG in your list of SIGs (see Section 5.6.2 [All-Sub], page 36) and positions you at the last message you read in that SIG (for continuity). Hence, by just clicking on the ‘>>’ button you will eventually read all the new messages in all the SIGs you are interested in.

There are three other buttons in the on-line reader’s control panel that allow you to move around the SIGs. These are ‘**Prev SIG**’, ‘**Next SIG**’ and ‘**Goto SIG**’. These all work with the currently selected list of SIGs (see Section 5.6.2 [All-Sub], page 36). The ‘**Next SIG**’ takes you down the list one SIG, the ‘**Prev SIG**’ button takes you up the list one SIG, and the ‘**Goto SIG**’ button opens a window containing the names of all the SIGs in the list and allows you to go to a SIG by just clicking on its name.

5.6.11 The kill filters

The on-line reader also sports a kill filter system. This allows you to save time by preventing the BBS from sending you messages that have subjects or authors which are listed in your kill filters. There are 6 buttons to control the message system’s two kill filters. They are arranged in two columns: on the left are the buttons for the author killer and on the right are the buttons for the subject killer. The ‘**Kill**’

¹⁰ Email: Kevin.Huculak@amuc.mtroyal.ab.ca

commands relating to CTS/RTS or seven wire handshaking). To enable handshaking set: 'HANDSHAKE=7wire'.

The serial device that IceTERM is to use may be set by the 'DEVICE' tool type. This is useful if you have some extra serial ports on an expansion card. For the ASDG dual serial board the setting to use would be 'DEVICE=siosbx.device'. Each serial port device can potentially have more than one unit. By default the first unit is normally unit number zero. If your serial card supports more than one port then the 'UNIT' tool type can be used to tell IceTERM to use a different port. For the Commodore A2232 card (which has 7 ports) the physically lowest port on the expansion connector is selected with 'UNIT=2' and the top-most port is selected with 'UNIT=8'.

IceTERM can also open the serial port in shared mode for those who really want to. To get this to happen include the tool type 'SHARED'.

9.26 The link diagnostics

IceTERM has a link diagnostics display mode. If you are installing a new modem or serial port and want to see what's happening on the serial link you can add the tool type 'LINK' to the IceTERM icon. This will add an extra two lines of information to the main control pannel. The top line tells you about the data you are sending to the BBS and the bottom line tells you about the data being received from the BBS. For example you might see:

```
SENT P      67 N   3 C   2
RCVD P     332 N   5 C   6 0   1
```

which means that you have sent the BBS 67 packets of data and IceTERM has received 332 packets from the BBS. Also, the BBS encountered problems with some of the packets you sent it, in fact 3 did not make it through intact (and were NAKed), the BBS sent 6 check packets to find out what the status on some packets it sent you was, while IceTERM sent the BBS 2 check packets because the BBS did not acknowledge receipt of two data packets fast enough. In the packets the terminal received from the BBS there were 5 that it had to ask for a retransmission on (because they were damaged), one of these IceTERM suspects was damaged by a serial port overrun²⁰. If you have everything set up properly you should get a display like:

```
SENT P      67 N   0 C   0
RCVD P     332 N   0 C   0 0   0
```

²⁰ This occurs when the handshaking between the serial port and computer (at either end) does not work fast enough and a byte or two gets lost. This seems to be the most common sort of serial port error.

well, all you have to do is undelete it now by clicking on the 'Delete' button to restore it.

The 'Delete' button is used to delete a message from a SIG. This can be used to remove messages that the moderator considers inappropriate for publication in the SIG. To delete a message just click on the 'Delete' button. The message is not physically deleted from the SIG until the next time that the BBS SIG trimming utility runs¹³ and so, until the trimmer runs the message may be restored by a moderator clicking on the 'Delete' button a second time. When a message is marked as deleted it will not be visible to or downloadable by any user.

The 'Perm' button is used to mark a message as being permanent. This helps to improve the usefulness of the SIG system as a reference tool by marking useful messages as permanent. Then when the message trimmer runs it will leave them in place, but age out the less-useful messages that were not marked as permanent. Note that to make a message deletable again you just click on the 'Perm' button a second time.

5.7 Batch downloading of SIGs

The 'Batch SIG' button is used to start a batch download of all the new messages in all the SIGs you are subscribed to. The tool works largely on its own automatically downloading any new SIG messages onto the your disk and uploading any new messages that you may have created by posting or replying with the IceOLR utility. As the tool does its work it will print status messages in the window showing the SIG currently being downloaded, the remaining bytes in that SIG and the total number of bytes transfered so far. When it is done it will close down automatically. Note: it only processes the SIGs to which you subscribe.

When you first subscribe to a SIG the BBS will only send you the last two days of messages in that SIG. To retrieve earlier messages see Section 5.7.2 [Interrupting batch SIGs], page 46.

¹³ This is sysop configurable, but typically will be run once a day.

code size and execution speed constraints¹⁸. IceOLR does allow you to edit your subscription list, so once you have installed the IceOLR you almost never need to go back to using the on-line reader.

5.7.2 Interrupting batch SIG downloads

Batch SIG downloads are interruptable, this can happen in three ways. First, the phone connection could be broken for some reason (this includes the BBS disconnecting you for running out of time); second, you might click on the batch SIG window's close button; and third, you might hit the **'Interrupt'** button. In all three cases the message download is fully resumable and the only retransmission that is required is the one message that was being transmitted at the time the transmission was stopped and some handshaking overhead to find out which SIGs need updating. To resume a batch SIG download that was interrupted all you do is to reconnect to the BBS and click on the **'Batch SIG'** button.

When a batch SIG transfer is stopped by pressing the **'Interrupt'** button the additional ghosted buttons will unghost and give you some extra control over the download process. This functionality was added primarily to address the problem with downloading the whole BBS message base when you are subscribing to a new SIG and also to allow you to grab older messages which are still on the BBS but for some reason are not on your machine and you want to read them. This is implemented through the extra buttons, of which there are five. The only one that is unghosted initially is the **'Interrupt'** button, you push this when you want to interrupt a batch download to use some of the other options. When the **'Interrupt'** is hit the download will stop and the other four buttons will unghost, you can hit the **'Change Date'** and **'Change SIGs'** buttons to describe what you want done. The date button will bring up a date selector which you can use to determine how far back in time you want to go¹⁹.

¹⁸ Included in the latter category is the display which shows an overview of the current SIG sorted by subject, author, addressee or posting date which has proved to be a popular addition to the IceOLR.

¹⁹ For a high volume SIG which you are just subscribing to you might only want to go back one or two days. Two days is the default for new subscriptions.

When publishing your public key it is a good idea to provide it in the armoured ASCII form. You can then include it directly in your user profile or insert it into the text of any message you might send. To generate a key in this form use a command like:

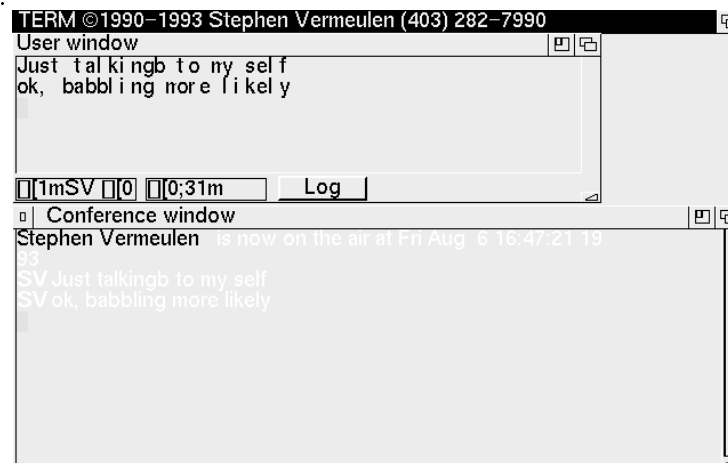
```
pgp -kxa "your name" file.dat
```

then you just insert the contents of 'file.dat' into your user profile.

Some networks (in particular FidoNet) have rules restricting the use of encrypted messages. If you experience problems sending encrypted mail you should contact your sysop for help.

IceOLR includes some built in support for PGP to help you collect keys, test the signatures of signed messages and sign the messages you post.

When the confer button is hit two extra windows will appear on the screen.



The Conference Windows

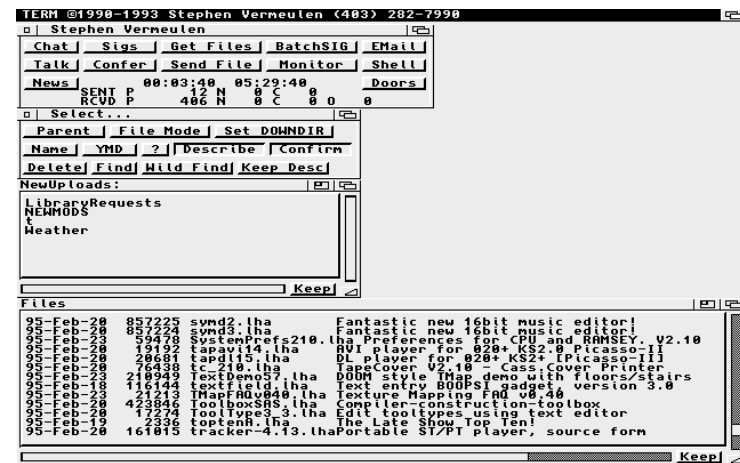
The user window is the one into which you type whatever you have to say to the other users who are on-line. This window has a limited editing capability (by moving with the cursor keys and over typing) until the return key is hit. When this is done the full line is sent to the conference server on the BBS to be sent to all the other users who are on-line in the conference system.

The user text entry window also contains two string gadgets in the lower border. These are used to enter two strings called the *hailstring* and *tailstring*. When you hit return your IceTERM program will insert the hailstring at the start of the message and append the tailstring to the end of the message. These two strings are useful when setting up fancy ANSI text effects (colours and italics) to make your messages distinctive, and for defining a prompt sequence²⁰ that identifies your messages. The tailstring may seem a bit useless, but it can be used to put a cleanup escape sequence into the message so that your special text effects do not interfere with other users' effects.

New messages will appear in the conference window. Since the conference system uses quite large packets it is able to transmit the text more efficiently than the chat function, so it can be faster to use the conference between the sysop and a user if there is a file transfer taking place at the same time.

When the conference is first opened the BBS will send the user some recent postings to the conference subsystem so that the user can catch

²⁰ Something a few characters long, like your initials, so others can see who is speaking.



The Directory and File Windows

5.9.1 Changing directories

When you select the 'Get Files' button, one of the windows that opens displays the names of directories that are on the BBS. When the window first appears, it does not have any text in the top bar of the window. To move to a particular directory, click on its name in the directory window. A 'Please Wait...' message will appear on the get files panel while the BBS sends you the information.

The title bar of the directory window will change to reflect the current directory that you are looking at. If there are any files in this directory that can be downloaded by the user they will appear in the files window. If there are further directories within the current one, they will be displayed in the directory window.

To move back up the directory tree you hit the 'Parent' button.

5.9.2 Sorting files

The file display window can display its contents sorted either by name (alphabetically) or by file date. The button that toggles between 'Name' and 'Date' is used to determine the method with which the names are sorted²². Sorting by date is a convenient way to see what files have been recently added to the BBS, for this reason the newest files appear at the top of the list.

You can save the way you like to have the files sorted by using the 'Snapshot' (see Section 9.6 [The snapshot menu], page 108) function.

²² The sort method only affects the files list. Directories are always sorted alphabetically.

price of obtaining two disks from the Fred Fish Freely Distributable Amiga Software Library, with the sole exception of CDROM collections of freely redistributable, public domain or shareware material,

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¹ Users groups must register their intent to do this by sending a letter to the above address.

descriptions are assigned to files either by the user when the file is uploaded or by the sysop when the file is validated before being made publicly available.

You can save the way these buttons are set by using the ‘Snapshot’ (see Section 9.6 [The snapshot menu], page 108) function.

5.9.6 Downloading a directory tree

The ‘File Mode’ button selects between downloading individual files and complete directory trees (when it is set to ‘Dir. Mode’). Since the BBS supports downloading directories, CDROMs such as the uncompressed Fish Disk CD are readily used with IceBBS. When the button is set to ‘Dir. Mode’ any attempt to select a directory will be recognized as a command to download that directory. Hence, you cannot change directories (except by using the ‘Parent’ button) while in the directory download mode. The directory download mode will also download any subdirectories within the selected directory and their contents (including other subdirectories). The directory download mode is resumable, so long as you leave the interrupted directory and its contents undisturbed in your download directory (see Section 5.9.7 [Download directory], page 52).

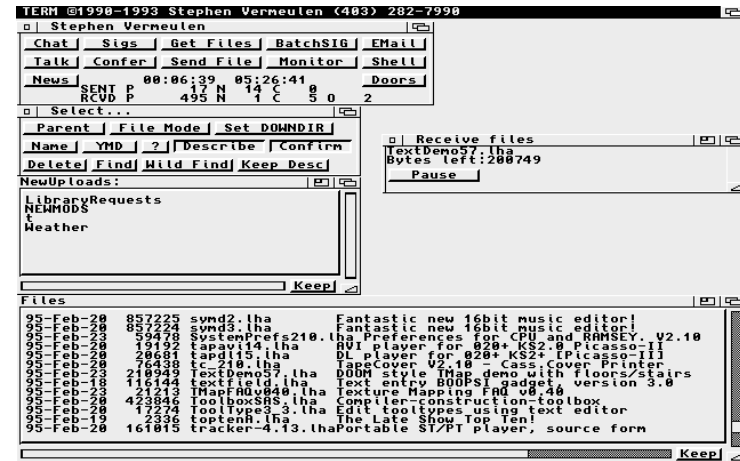
5.9.7 The download directory

The ‘Set DOWNDIR’ button is used to override the ‘DOWNDIR’ tool type (see Section 2.4 [Basic Tool types], page 5). If you need to start downloading to a new directory²⁴ or one other than that specified by the ‘DOWNDIR’ tool type in the IceTERM icon you can click on this and then enter the name of the directory in the string requester that pops up.

The directory to which files go is by default ‘RAM:’. If you download a second file of the same name, at the same time as the first file is being downloaded, the second file will be sent to your ‘T:’ directory (which may be overridden by the ‘TEMPDIR’ tool type, see Section 2.4 [Basic Tool types], page 5).

²⁴ Perhaps if you run out of disk space.

usually so that another download can be more quickly completed, or so that other BBS operations (like batch SIG downloads) go faster. This pausing is not immediate, the transmission will stop once that download window's server has emptied its disk buffers. The size of these buffers varies between IceBBS systems, those with CDROM drives tend to be larger.



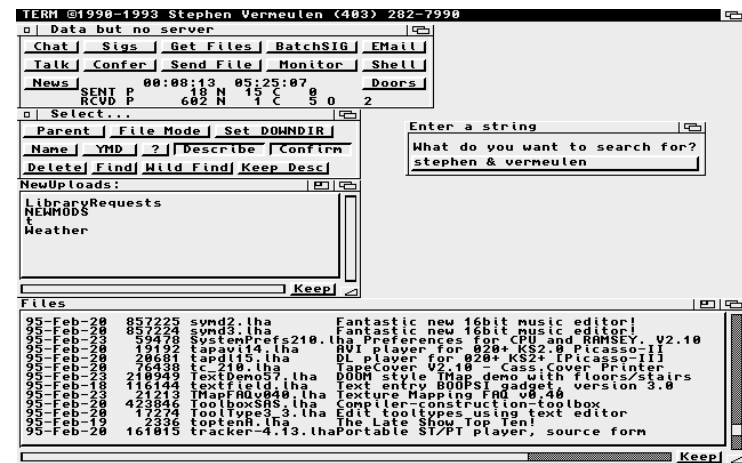
The Download Progress Window

File downloading is the lowest priority BBS operation that a user can perform. This is so that a large file download can be started and then you can go and do other more interactive tasks on the BBS with little impact.

5.9.9 Finishing an interrupted download

The file download system also supports a resume feature. To get this to work, just leave the partial files in the download directory (see Section 5.9.7 [Download directory], page 52) and then re-select them for download. IceTERM will notice that a file of the same name already exists in the download directory and will then ask you if you want to resume the download. If you do resume then the IceTERM program will request a partial retransmission from the BBS, the system backs up in the partial file by about 1000 bytes to prevent any possible corruption due to errors that may have occurred during the writing of the last few blocks of the file. Of course, you should clean out your download directory from time to time, otherwise you might see this message often.

Directory downloads may also be resumed, allowing one to easily copy large directory trees over several connection sessions.



Searching with the Find button

5.9.11.1 The Find button

When the ‘Find’ button is pressed it will summon a string requester where the user types in the string he wants to search for. These strings can contain words to be searched for separated by logical operators. In the figure I have requested a search for all files contains *both* the word “stephen” and the word “vermeulen”. The searches performed by the ‘Find’ button include the full contents of all the files²⁶. Normally such a search would take a very long time to do, but this system uses a pre-computed database that the sysop updates occasionally, so it actually happens very quickly.

The result of the above search will appear in a scrolling text window as shown in the next figure:

²⁶ In the case of archives (like zip, zoo and lha files) the search includes all the files within the archives.

F

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A & (Y | X)

it will then evaluate 'Y | X' to produce 'Z'

A & Z

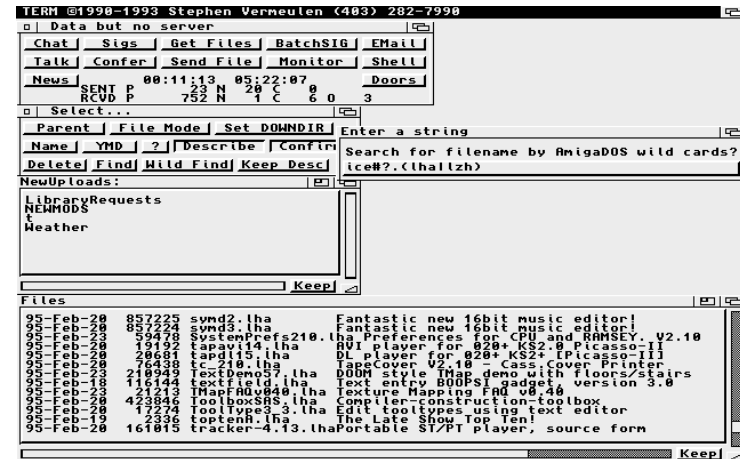
and will finally evaluate 'A & Z'.

If there are no parentheses then evaluation proceeds from left to right as was the case when it evaluated 'B - C | X' above.

5.9.11.3 The Wild Find button

One type of search which users have found difficult to do with the full search function described previously is a simple wild card search on file names. This is provided by the 'Wild Find' button²⁷.

When you click on the 'Wild Find' button a string requester will appear as below:



The Wild Find button

Into this requester you can enter a valid AmigaDOS wildcard search pattern and then the tool will search the file databases for any files whos' names match the pattern. For example if you enter:

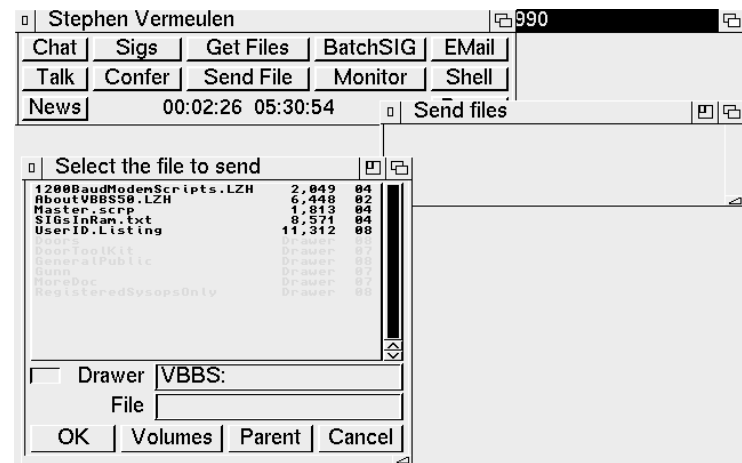
ice#?.(lha|lzh)

you will see 'iceolr' and 'iceterm' but not 'muiicecream'. If you enter:

#?ice#?

you will see 'muiicecream' as well. You can use the full set of pattern matches too, including the '~()' type operators.

²⁷ Inspiration and much goading to implement this is due to Bryan Ewert who implemented the first version in ARexx to demonstrate how useful it would be.



Sending a File

You move about the directory tree using the File Requester's 'Parent' gadget to go back up the tree and by clicking on directory names to descend into the directory tree. You can move to the the top of the directory tree to see all the disks and assigned names in your system by clicking on the 'Volumes' button. With the ARP requester you get a list of all the 'Drives' in your system by either clicking on the drives gadget or by hitting the menu button on the mouse. The 2.0 requester is also resizable (the ARP requester is not) by the grab handle in the bottom right corner. To send a file you can either single click on the file and then click on the 'Ok' gadget or you can double click on the file name. To exit from the tool you can either hit the cancel button or the close window gadget.

Once a file has been selected the BBS will prompt you for both long and short descriptions to be attached to the file. When these have been entered the transmission will start and an additional little window will show the name of the file being sent and the number of bytes left to send. When the file transfer has completed²⁹ the file requester will reappear allowing you to select another file. If you want to send several files at once you can do so by starting the first and then clicking on the send files button to start a second session.

²⁹ Do not click on the close window button of the upload progress window to close down the system. Instead, wait for the file requester to reappear and click on its close window or cancel buttons. The close window button on the file progress window is intended to be used to abort an upload.

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```

Paused -- Press SPACE to continue
Number: 611 Reply to: 607
From: Stephen Vermeulen
Date: Sat Jun 6 20:38:01 1992
Subject: TERM..

> Found one small problem.. when you click on SIGS, TERM wr
ites the
> right hand gadgets over top of the border when you use larg
e fonts.
> Looks like it may be using the outside width of the window
rather
> than the inside width.
>
> Greg

Just make the window wider. Note that Amiga Windows clip by
default
on the outer borders only, on my scrolling lists I have added
a custom
clip rect to th

```

The Feedback Window

As soon as feedback has been started the BBS server will bundle up all the new feedback messages and start sending them to you in one continuous, uninterrupted stream. This means that if you take your time reading the first message the BBS will continue its transmission and send the second, third and so on. These messages will be queued in RAM on your machine and when you step to a new message the display will be updated a lot faster than most modems are capable of.

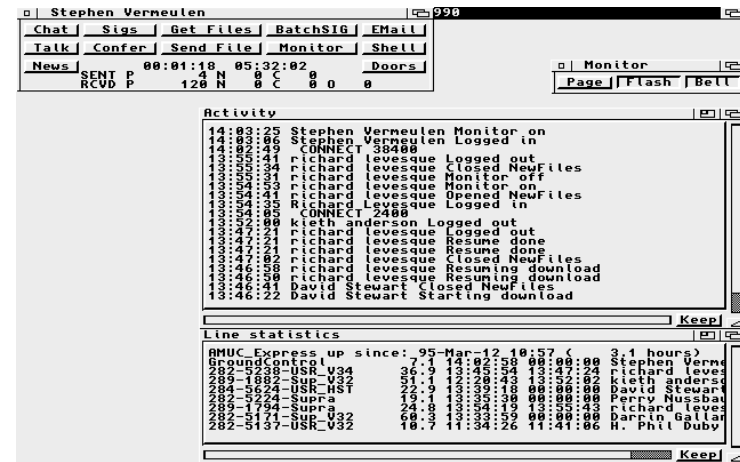
There is a problem with this design. Because of the message streaming there is no way³³ for the user to move about the message base at will, it is purely a *read it once and go onto the next* type of reader. It is unlikely this tool will be improved further as the intent is that the SIGs system will replace it entirely (this is also why the feedback tool no longer has a button in the control window).

Another example of how old this tool is can be seen in the fact that it uses keyboard keys for its controls. The following keys are used:

SPACE	the space bar is used to page through a long message one screen at a time,
RETURN	the return key is used to step from one message to the next, once the end of the current message has been reached. The reason that the return and space keys were not combined into one key is that it is very easy to space past the end of the current message and there is no way to back up to

³³ This is not strictly true as one could log into the BBS in ASCII mode and read the feedback messages there, where some additional movement capabilities exist. Also the sysop can reset your high message pointer.

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The Monitor Windows

The activity list window displays the current activity on the system. It shows *who did what when*. When the tool is first started a sysop defined number of prior events will be sent, after these old events have been sent the tool will receive updates as people move about the system on the other lines.

The line statistics window shows the time the BBS was last started and the total number of hours it has been running since then. Following that are a series of lines, one for each line on the BBS, that show (from left to right):

- The name of the line, this is usually something descriptive about the line, such as the phone number or the type of modem that is on it,
- The percent utilization of the line. This is the total time the line has been in use out of the total time the BBS has been running,
- The login and logout times of the last users of the line. If the logout time is zero then that user is still on the line,
- The name of the current (or last) user of the line.

The monitor control window with the three buttons is to allow you to page the other users who have their monitor windows open and to control the paging bell and screen flash on your system.

To page the other users who are on the system you hit the 'Page' button. Doing so will send a beep signal to all users who have their monitor windows open. This is usually done to attract someone's attention³⁴ to get them to go into the conference. The beep signal is translated into either an audible beep or a screen flash at the other user's end.

³⁴ It would be nice to be able to page individual users for private conferences, it is on the to-do list.

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Y

Yan Koehler 45

Z

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for your use. With versions of IceTERM greater than 101 this delay does not occur.

5.13.1 The user list

The user list is stored in the directory that you selected with the IceTERM icon's 'EMAILROOT' tool type entry (see Section 2.4 [Basic Tool types], page 5). If you look in this directory you will find one subdirectory for each IceBBS system you call, within these subdirectories are the user name lists and the messages that you have received.

From time to time you might want to update your copy of the user list. This is done with the 'Find Users' button. Clicking on this button will open up a string requester where you can type the first part of the name of the user you are looking for (even just the first character will do—and it is not case sensitive). IceTERM will then request that the BBS send the names of all the users which start with the sequence of letters you entered. This is usually a short list and will not take too long to send. IceTERM will save this list, adding it to any other name searches that you do, in that way it gradually allows you to build up as much of that BBS's user list as you need.

If you have a faster modem (or don't mind the wait) you can get the whole user list by just hitting return in the search string requester without typing any text in.

Also, this name downloading is an *updating* process, if any users that already appear in your list get removed from the BBS, then when you update their section of the user list their names will be removed from your local copy too.

5.13.2 Sending email messages

Note: the IceOLR program can also be used to compose and send email messages to other users on the BBS, to users on other FidoNet BBSs and to internet email addresses. The advantage that the IceOLR email function has is that you can create and read email while off line.

To send a regular text message to another user on this BBS you click on the 'Send Message' button in the email control panel. As soon as this is done a list of the users on the BBS will be presented (if you cannot find the name you are looking for click on the 'Find Users' button), you click on the name of the user you want to send the message to and then your favourite text editor will be summoned for you to compose the message in (see Section 2.6 [Your Editor], page 8). Once you have finished entering the message you save it and exit the editor, as you do

zone:net/node.point

where:

- zone** is approximately the number of the continent the BBS is located on (zone 1 is North America and zone 2 is Europe),
- net** is the network within the zone that the BBS belongs to. Networks are usually located within the dialing area of a local phone call, but they may be smaller or larger for organizational purposes,
- node** is the number of the BBS within the network to which it belongs. Within any given network the node numbers must be unique. This is normally the finest level of addressing necessary. Nodes within the same network generally do a lot of talking between each other,
- point** is the last level of FidoNet addressing. This is usually a single user system which only communicates to the rest of FidoNet through one machine (its boss). Note that points are not listed in the FidoNet phone directory³⁹, and if a FidoNet address is given without a point number it is taken to be zero. All nodes have a point number of zero.

As there are no phone books of all the users on the various FidoNet supporting systems in the world it can be difficult to start up a conversation with a user via the email. However, what does happen often is that people meet in one of the public echomail conferences and pursue other discussions that are not within the regular scope of the conference area via private email exchanges.

5.13.6 FidoNet newsgroups and email

The BBS also provides a SIG monitoring facility for FidoNet conferences. Since some of the FidoNet echomail conferences carry such a large volume of messages per day some people prefer not to read them at all. Yet what are they supposed to do when they have a particular question that might readily be answered by posting it to a conference? They would have to read the conference for perhaps a week in the hope that a reply comes their way. The FidoNet processor on IceBBS will monitor the incoming messages in all the FidoNet SIGs and if it finds one addressed to a user on the BBS it will send a copy of that message to the user by email⁴⁰. Then the next time the user accesses the email

³⁹ The FidoNet nodelist is published weekly and lists over 20000 systems.

⁴⁰ Some people do not like this feature, it will become optional later.

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5.13.9 How Internet mail works

What happens is this: IceTERM will insert the necessary From:, To:, and Subject: lines in to your message along with a blank line, that in the Internet world, separates the header from the message. It then sends the message over to IceBBS which, upon receiving it, invokes the SENDMAIL program (which is part of the UUCP package that the BBS machine is running). If the BBS does not have UUCP available then it will send back an error message to you explaining this unfortunate fact. Every so often a script file on the BBS machine will do a bit of Internet processing, in particular the programs UUxqt and UUcico will get run and the message will take another step in its journey. In all probability the message will leave the BBS machine at this point and disappear into an evil smelling puff of smoke. Although there is a chance that someone (or something) lurking on the Internet will see it and send a reply to you.

5.13.10 Replies from the Internet

When a reply does come back from the Internet it will appear like any other email, the full message (including header) will be displayed for you to edit as you choose, if you want to reply to the message. Note that you don't need to worry about the contents of the header in most cases as IceBBS and IceTERM have already extracted all the information they need to address the reply correctly, so you can even delete all the header information. The upper limit on the size of these messages is about 50K bytes so if you need to send larger messages (typically uuencoded⁴³ files) you have to split them into chunks, and send each chunk as a separate message.

5.13.11 Your address on the Internet

You may want to know what your Internet style email address is so someone can send you email (typically you add this address to your signature text that you include on messages you post in the SIGs). It will be of the form:

```
<UserID>@bbsname.xx.yy.zz
```

⁴³ UUencode and UUdecode are programs that take a binary file and convert it to a plain ASCII text form (suitable for sending in an email message) and back again. The PGP package (see Chapter 10 [Encryption], page 123) also has this capability which it calls *armoured ASCII*.

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5.13.12 Advanced email techniques

This section contains some additional information on things that you can do with Internet style email. The Internet email messages follow the RFC-822 specification, some of the features that are implemented are:

- header line folding,
- supports the reply-to header, if a reply-to line is present then that's where the replies go, if one is not present then replies go to the from header line,
- email to a user list is possible, comma separate the addresses,
- the header keywords to be any mixture of upper and lower case,

The email processor on the BBS that converts inbound internet messages into IceBBS format email supports human readable names, this means that someone out there can send a message to you by quoting your username, for example:

```
To: "stephen vermeulen"@amuc.mtroyal.ab.ca
```

will now stand a good chance of reaching my account on the AMUC Express BBS. I say *a good chance* because I suspect that some mail processors may not like user names longer than 8 characters and may not like imbedded spaces, so the email processor will also map the following names to the 'stephen vermeulen' account

```
stephen_vermeulen@amuc.mtroyal.ab.ca
stephen.vermeulen@amuc.mtroyal.ab.ca
```

the cryptic account number based system is still supported and will be added as the 'From:' line to any email you create. The sysop can add additional account name aliasing via UUCP's 'UULIB:aliases' file if it is needed. For example if the current AMUC Chairman is Ian Sinclair then the following aliases:

```
amuc: ian_sinclair
UsersGroup: ian_sinclair
chairman: ian_sinclair
president: ian_sinclair
```

would redirect any mail addressed to 'amuc', 'usersgroup', 'chairman' or 'president' to the account named 'ian_sinclair' and if there is no 'ian_sinclair' account then the 'ian_sinclair' account would receive the mail.

And now for the new feature: Internet expert mode. This is intentionally hidden away since in order to use it you need to understand how to write Internet compatible mail headers. To enter expert mode either when sending a new internet message or replying to one you have received all you need do is put a '~' as the first and only character in the subject string. When you do this IceTERM will not add any 'To:' or 'Subject:'

Regards, the tester.

The blind carbon copy ('BCC:') gets its name from the fact that the primary and secondary recipients ('To:' and 'CC:' addresses) do not get the 'BCC:' lines included in their copies of the mail. So in the above example 'stephen vermeulen', 'jeff rose' and 'wuth' have no idea that the message was also sent to 'bryan ewert', 'ian sinclair', and 'AMUCChairman'.

In the next version of the message we add a 'reply-to:' line so that if any of the recipients replies to the message both 'the tester' and 'AMUCNewsLetterEditor' get copies of the reply:

```
To: "stephen vermeulen"@amuc,
CC: "jeff rose"@amuc, wuth@castrov.cuc.ab.ca
BCC: "bryan ewert"@amuc,
      "ian sinclair"@amuc, AMUCChairman@amuc
Reply-To: "the tester"@amuc, AMUCNewsLetterEditor@amuc
Subject: Some wild ramblings...
```

Here is a test message, it goes out to six people.

Regards, the tester.

Note that by (mis)using the reply-to line you can send a message to several people (maybe even Ken Pierce) and get the replies to go to several other people (and if you wish, *not* include yourself among the reply recipients).

5.13.13 Using the user profiles

The 'Edit' button is used to enable you to edit your own profile. So what is a profile? The profile is intended to be a little informative blurb about yourself so that other users can figure out if they want to send you email. Perhaps there are several people with similar names, or perhaps the user is just looking for someone who considers himself an expert in a certain arcane area. One of the more interesting uses of the profile is to provide a place for you to post your "public encryption key" (see Chapter 10 [Encryption], page 123) so that other people can send you encrypted email.

Two buttons on the email control panel (see Section 5.13 [EMail], page 65) 'Show' and 'Edit' are used to browse and maintain user profiles. The 'Show' button will bring up the list of users, from which you can pick users whose profile descriptions you want to read. When you click on the name of a user in this list two things will happen. First the title bar of the list window will change to show the account number of this person (see Section 5.13.11 [Your address], page 70); and second, if the user has