THIS FILE CONTAINS MISCELLANEOUS NOTES AND LAST-MINUTE CHANGES.

They are in rather miscellaneous order, so please scan topic headings
for any that might apply to you.

THIS PROGRAM IS SOLD ON A PER-MACHINE BASIS! Unless otherwise
specifically arranged, you do not have the rights to use it on more
than one PC.

INSTALLATION: DOS and WINDOWS

This software can be installed using either DOS or Windows.

From the DOS level, log to the distribution floppy, then execute
INSTALL, stating the directory you want it to place everything in
(you no longer need to name the target operating system). For instance:
   A:
   INSTALL C:\ANZIO

OR-->

From Windows Program Manager, do File Run, then enter:
   A:SETUP
(or replace 'A:' with the appropriate drive). You will be asked where
you want to put the files.

Both methods do essentially the same thing, except that the second way
creates a program group and several icons for you in Windows.

ANZIONET and ANZIO14

The "AnzioNet" product contains two versions designed for networks,
ANZIONET.EXE and ANZIO14.EXE. The first is for use with INTERRUPT 6B
drivers, and the second for INTERRUPT 14 drivers.

Use ANZIONET for Novell software, either NASI/NACS/Novell Connect, or
Lan Workplace for Dos's TELAPI (this is a change from earlier procedure).
Use ANZIO14 for other redirectors, such as TCP/IP drivers from FTP,
Wollongong, Lantastic, etc.

If you are working in a Windows environment, you need to work with a
Windows TCP/IP driver (compliant with the WINSOCK standard), and use
our AnzioSoc program.

Following are notes on running various combinations.

NOTES ON USING ANZIONET WITH NASI

ANZIONET allows you to use ANZIO on a Novell (or other) network with an
Asynchronous Communication Server (ACS). An ACS is a special PC somewhere
on the network whose sole job is to handle serial communications. So,
instead of having each PC on the network hooked up to the host machine, the
ACS is hooked up via one or more lines to the host, and any PC in the
network can grab an available line.

In later versions of Novell's software, the file server can serve as the
communication server also.

```
   To run in this environment:
      1. Make sure the ACS is up and running.
      2. Load NASI (from Novell) or equivalent on the PC you wish to use.
      3. You may want to verify NASI operation by testing Novell's generic
         emulation utility, TTY.
      4. Load ANZIONET (not ANZIO).
      5. When the title screen clears, you will be talking to NASI.  You must
         tell NASI to connect you, i.e.,
            CONNECT <linetype> <newline>
      6. You should now be able to communicate with the host system.
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NOTES ON USING ANZIONET WITH LAN WP TELAPI

   Novell's Lan Workplace for DOS provides, among other things, TCP/IP
   capability at the DOS level.  AnzioNet has been especially adapted to
   work in this environment. Proceed as follows:
      1. Load normal network software.
      2. Load TCPIP.EXE
      3. Load TELAPI.EXE, telling it the name of a file containing target
         IP addresses or names:
            telapi -f<filename>
         where <filename> is the name of a simple text file listing available
         hosts.
      4. You will need to supply ANZIONET with a "hostname", which it will
         store in its parameter file. This hostname is considered a wild card.
         That is, up to 8 characters of the host name will be considered as
         the first characters of a name to be matched (by TELAPI) against
         host names (or addresses) provided in the file referenced in step 3
         above. If NO hostname is provided, the first match will indicate the
         host to be connected to.
      5. Run ANZIONET.EXE, with a hostname:
            anzionet /h:<hostname>
         or without:
            anzionet
         (Don't put in the '<' and '>'). Once you have specified a successful
         hostname, ANZIONET will store this in your parameter file.
      6. If all goes well, you will be connected. If you quit from ANZIONET
         at any time, your connection will be broken. You can connect again
         but the previous session is gone for good. If Unix drops its end
         of the connection, as it will if you, for instance, type "exit"
         at the shell level, ANZIONET will detect this, and will either exit
         or reconnect. To determine this, at ANZIONET's "Function" prompt,
         enter
            RECONNECT ON
         or
            RECONNECT OFF

Host name resolution works as follows: ANZIONET specifies a host name by
one of the methods indicated above. It passes this name to TELAPI, which
must be able to find it in the file referenced in step 3 above. This name
is then passed on to TCPIP, which must be able to resolve the name,
typically within the file \NET\TCPIP\HOSTS (more specifically, the file
HOSTS in the directory named in "PATH TCP_CFG" in the "Protocol TCPIP"
section of the NET.CFG file).

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```

NOTES ON USING ANZIOSOC WITH LAN WP

Novell's LAN WorkPlace (LWP) includes a WINSOCK.DLL, which its
installer places correctly in the \WINDOWS directory. However, there
in an additional module, NOVASYNC.EXE, which WINSOCK calls, which
is erroneously placed in the LWP program directory, normally \NET\BIN. If
\NET\BIN is not in your PATH, then WINSOCK can't find NOVASYNC, and
AnzioSoc won't run.

To solve this problem, copy NOVASYNC.EXE into your \WINDOWS (or
\WINDOWS\SYSTEM) directory.

NOTES ON USING ANZIO14:

  ANZIO14 is a special version of ANZIO that uses INTERRUPT 14 for its
  communication. This works with other companies' TCP/IP software, and other
  special communication situations. In these cases, some software must be
  loaded before ANZIO14, to intercept communication calls and redirect them.
  If you are working with WOLLONGONG PATHWAY, for instance, you must load
  BAPI. See the appropriate documentation for help.

  The interrupt 14 interface is loosely defined. One area of variance involves
  what happens when Unix closes its end of the TCP/IP connection, as it will
  do if you enter "exit" at the shell level. Various INT 14 drivers take
  various approaches to notifying an emulator (i.e., ANZIO14) that this has
  happened. Furthermore, this behavior is rarely documented well, if at all.
  We continue to experiment with different providers' software.

  If ANZIO14 knows that the host connection has been terminated, it will
  quit, at which point you can rerun another session.

OBJECT CODES FOR FILE TRANSFER PROGRAMS
  Many UNIX systems do not have a "C" compiler. That presents a problem with
  the file transfer programs "send-pc.c" and "recv-pc.c". So we have come
  up with two solutions.

  Your distribution disk now contains objects for file transfer programs
  for the NCR System 3000 and the Tower, under subdirectories
  NCR3000 and NCRTOWER, respectively. The included files are
     send-pc   (compiled from send-pc.c)
     recv-pc   (compiled from recv-pc.c)
  These can be installed via the floppy disk drive on your UNIX machine.
  This approach is referred to as "METHOD 1" below.

  There are also special files named
     send-pc.ech
     recv-pc.ech
  These are shell scripts ("batch strings") that create the object files.
  They are installed via "METHOD 2" below. The advantage of this method
  is that it can be done from the ANZIO PC, even over a modem.

  METHOD 1: LOADING VIA FLOPPY
     Many Towers have a 5.25" or 3.5" diskette drive. All 3000s have a 3.5"
     drive. Thus you may be able to move the files over with the special
     utilities include with those systems for reading DOS diskettes.

Put the distribution floppy (#2 if you have two diskettes) in the UNIX
machine's drive. If you have the wrong diskette size, either copy
the files to the correct disk size using a DOS PC, or use METHOD 2 below.

On the 3000, enter:
    doscp a:<filename> <directory>
to load each file.

For example:
    doscp a:ncr3000/send-pc /usr/bin
    doscp a:ncr3000/recv-pc /usr/bin

On the Tower, enter:
    pcdsk
    mtu
then answer questions about files to move.

With either of these methods, you will need to make the files
executable. To do this, use the chmod command:
    chmod +x /usr/bin/send-pc
    chmod +x /usr/bin/recv-pc
for example.

METHOD 2: UPLOADING THE ".ECH" FILES
    Each ".ECH" file is a series of commands, which together create an
    executable file. Following is a complete example for the "send-pc" file.
    Repeat it for the "recv-pc" file.
        1. Log into an appropriate directory on the UNIX system:
                cd $HOME
        2. Upload the ".ech" file:
                cp /dev/tty send-pc.ech
                <alt-F>openi send-pc.ech
                <alt-F>transmit trailer <ctrl-D>
        3. Use the shell to execute the file:
                sh send-pc.ech
            This will result in a file named "send-pc" in the same directory.
        4. Copy the file to a directory in the PATH:
                cp send-pc /usr/bin

WHERE TO PUT THE OBJECT FILES
    When you give UNIX a command, it looks in the directories specified
    in your PATH for a file of that name. You can see your PATH by
    typing
        set
    Note that UNlike DOS, UNIX will NOT look first in your current
    directory. That's why you'll sometimes do
        ./<command>
    If you want the programs listed above to be available to everyone,
    they'll need to be in a directory included in your PATH. You can
    either copy them to a directory in the standard PATH, such as
    /usr/bin, or you can change your PATH to include the directory
    they are in.

UFT FOR UNIX
  We now have available a UNIX version of "Universal File Transfer" (UFT).
  This pair of programs makes file transfer between UNIX and DOS easy, fast,

and error-free.

    Specific features include:
        Wild-card transfer in either direction
        Compression, for faster transfer
        Error-checking
        Binary transfer, allowing data files and objects to be moved between
            systems
        Command-line driver operation

    UFT/UNIX is only $250 per UNIX host machine.

TSR operation:

    Effective with release 9.2, ANZIO can be loaded and stay resident in
    memory, allowing "hot-key" operation. Refer to the ANZIO manual.

    If you are using ANZIO this way, you may want to run the "small" version
    of ANZIO, on the disk as "ANZIOS.EXE".

ALTERNATE EMULATIONS AND KEY FILES

    Effective 9.3, ANZIO can emulate terminals other than the NCR 7900
    and 7901 (ADDS Viewpoint). To tell ANZIO what to be, enter:
        <F6>TERM N7900<newline>
    or replace "N7900" by "N7901", "VT220" (or ANZIO), or "WYSE60".
    Your current setting will now show on the help screen.

    The emulation does not automatically affect function key definitions.
    If your software requires the use of function keys, simply define each
    key combination, or refer to the provided key files, VT100.KYS,
    VT220.kys, VT220S.KYS,
    ANZIOTIC.KYS, WYSE60.KYS, and KERMIT.KYS. Each of these files has a
    corresponding ".DOC" file (i.e., KERMIT.DOC) explaining the keys
    defined.

    The KERMIT.KYS file is set up especially for use with Word Perfect 5.0
    on UNIX. This file defines all 40 standard key combinations. When you
    set WP for KERMIT, set ANZIO to TERM VT220, and READ KERMIT.KYS, you
    can use the same key combinations that you would use in WP for DOS. Note,
    however, that WP 5.1 changed all this, and KERMIT.KYS will not work with
    WP 5.1 (see following).

    The ANZIOTIC.KYS file defines all the key combinations that are
    defined in ANZIO.TIC, explained below. It also contains shifted and alt-ed
    function keys for use with Word Perfect 5.1 and ANZIO.TRS, explained below.
    Note that with ANZIOTIC.KYS installed, all variations of <F5>, for instance,
    send key codes to the host. So, to get to ANZIO's help screen, you will
    need to do <alt-M>. Special <alt-> combinations are summarized here:
        <alt-M>   brings up ANZIO's "menu" or "help" screen.
        <alt-F>   produces a FUNCTION prompt at the bottom of the screen.
        <alt-A>   is the "grand abort" or "panic button" key, for when ANZIO is
                  locked in some internal loop.
        <alt-H>   brings up ANZIO's HELP INDEX.
        <alt-X>   quits ANZIO.

    Please contact us if your software does not work correctly with ANZIO,

or if you need assistance with key definitions.

ANZIO TERMINFO FOR UNIX SYSTEMS

  When ANZIO is set for TERM VT220, it actually recognizes more escape
  sequences than the VT220 does (we've included some from the ANSI
  definition - see the 9.6 changes section below). Also, the VT220
  has strange function keys, and that is somewhat limiting. So, you
  might want to tell UNIX about a "terminal" called "ANZIO".

  Many programs under UNIX (such as "vi", "sysadm", and some COBOL
  systems) use the "terminfo" data base to find information about
  terminals. So, if you create a terminfo entry for ANZIO, and then
  set your TERM variable to "ANZIO", you can take advantage of
  the expanded capabilities of ANZIO. And we've made it easy.

  There is included with ANZIO a file named "anzio.tic". This is a
  terminfo source file. Follow these steps to install and use it:

     Upload anzio.tic to your UNIX system (as a text file) using
        either the simple upload procedure defined in the manual,
        or one of the utilities described herein.
     To "compile" anzio.tic, tell UNIX:
        tic anzio.tic
     Set your TERM variable to anzio (upper or lower case). Tell UNIX:
        TERM=anzio;export TERM

  Note that the ANZIO terminfo is intended for color PCs. There is also a
  file named ANZIO-M.TIC for monochrome PCs -- follow the above procedures
  using "anzio-m" instead of "anzio". Also, there is a variant called
  ANZIOWIN.TIC that implements some of the differences in Windows.

  The ANZIO terminfo includes definitions of many key combinations, such
  as <shift-F1>. To make ANZIO send the correct sequences, use the
  ANZIOTIC.KYS file. Tell ANZIO:
     MERGE ANZIOTIC.KYS

ANZIO and ACUCOBOL

  The ACUCOBOL runtime does not use terminfo (see above), but has its own
  file of terminal information, called "a_termcap", which is based on the
  earlier Unix "termcap".

  To support this, we supply a file "ANZIO.CAP", which matches Anzio's
  behavior when running as VT220 (or "ANZIO"), with ANZIOTIC.KYS loaded.
  To install this capability, copy the ANZIO.CAP file to your Unix system,
  and then add it on to the end of the a_termcap file used by ACUCOBOL.

ANZIO and WORD PERFECT for UNIX

  We have now made special efforts to make ANZIO work extremely well with Word
  Perfect for UNIX (WP 5.1 and later). These features include:
     1) Normal, shifted, control, and alt function keys that match WP for DOS.
     2) Support for pass-through print from WP/Unix to the PC's printer.
     3) Support for Print Preview on VGA and Hercules screens under DOS,
        and all screens under Windows.

The key to these features is the file ANZIO.TRS, which is a WP terminal
definition file that describes ANZIO. This works in conjunction with
ANZIOTIC.KYS, described above.

To implement:
   1) Set ANZIO's "TERM" to VT220.
   2) Set UNIX's TERM (and/or WPTERM) to ANZIO.
   3) Be sure you have told ANZIO to READ (or MERGE) the keys file
      ANZIOTIC.KYS.
   4) Load the ANZIO.TRS file onto your UNIX system. This file must be put
      in WP's "shlib" directory, as "anzio.trs" (must be in lowercase). This
      is NOT a text file, so it must be transferred to UNIX in "binary" or
      "transparent" mode, such as a) via the UNIX system's floppy disk
      drive; b) via ANZIO and UFT; c) via FTP; d) via Kermit; or e) via
      ZMODEM. Note also that you probably need to have root privileges in
      order to put a file into the shlib directory.

You will also probably want to install the ANZIO.TIC file, as described above.

ALTERNATE METHOD OF DOWNLOAD UNDER UNIX
   This release includes a file named DOWNLOAD, which is a UNIX shell script.
   Simply upload it and make it executable. Then invoke it by doing
      download <filename>
   or
      download <wildcard>
   and it will do the rest.

ALTERNATE UPLOAD METHOD UNDER ITX
   An alternative method for uploading 80-column text files from PC to
   ITX involves using ITX's "SYSIN". It is probably easier to use, especially
   if you are unfamiliar with ITX's $EDIT.

   Tell ITX:
      ASSIGN A <filename>(<unit>),NEW,<sectors>,AP
      MOVE SYSIN A
   Tell ANZIO:
      OPENI <filename>
      TRANSMIT TRAILER END$

NOTES ON "OVERRUN" MESSAGES
   If you see the word OVERRUN flash on the bottom of your screen, it means
   that your PC hardware is experiencing lost characters. There is some
   information on this in the ANZIO manual, but a new factor has entered
   the picture - DOS 5 (and 6).

   Many people running under DOS 5/6 are experiencing OVERRUNs. We believe there
   are two possible sources for these problems in DOS 5 and 6. One is EMM386,
   the expanded memory manager included with DOS 5/6 and Windows 3.1. The other
   is SmartDrive's write-back cache feature.

   You have these options:

   1) Remove EMM386 from your CONFIG.SYS and reboot. This should get rid
      of the problem. EMM386 is only required if some of your software
      needs EMS (exPANDed memory).
   2) Replace EMM386 with a third-party memory manager, such as QEMM from
      Quarterdeck.

3) Configure SmartDrive so it does not do write caching. See your DOS
         manual for more information. To disable write caching on drive C:,
         for example, do
            SMARTDRV C- <size> <size>
      4) Upgrade your serial port to a 16550AFN. Contact us for more
         information.

132-COLUMN MODE in DOS

   All versions of ANZIO support 132-column modes, but it's trickier under
   DOS than under Windows, because it's not quite standardized. To enable
   DOS versions to display 132 columns, you have three choices:

      1) You may be able to leave ANZIO's MODE-132 setting at 0, if your
         video card BIOS supports VESA mode 109, the VESA standard for
         132x25.
      2) If you have documentation on your video card, check that to find out
         what mode number is 132x25, and tell ANZIO with the MODE-132 command.
      3) Run the program VIDMODES, distributed with ANZIO. This program tests
         modes from hex 11 to hex FF, and displays results. It also tells you
         if you have VESA support. If you have a non-VESA 132x25 mode, put
         that in ANZIO's MODE-132 setting. Or, if you have VESA mode 109,
         set MODE-132 to 00 (see option 1).

IF YOU ARE UPGRADING...
   Pay special attention to the Appendix entitled MIGRATION FROM EARLIER
   RELEASES in the ANZIO manual.

CHANGE HISTORY

The following is a progressive list of program changes, for those who are
interested. Those marked with an asterisk (*) are non-trivial. Some changes
apply only to certain variants of Anzio, as noted.

Changes in 9.0
   1. Sample key file (SAMPLE.KYS or RMCOS.KYS) will be read on initial
      startup.
   2. CALC no longer uses 'C' for clear, as it is needed in hex mode.
   3. In transparent print (ESC-3), ignore DC2 and DC4 ONLY IF in RMCOS.
   4. Bug fixed related to larger memory size for scroll buffer (9.0a).
   5. Bug fixed related to #103 above.
CAPPED AND RELEASED AS 9.0 10-21-88
   6. Bugs fixed re. defined control keys (0 to $1F) (9.0b 1-10-89)
Changes in 9.1
   1. Compiled under Turbo 5.0.
   2. Added INSERT-LINE (<ESC>M), DELETE-LINE (<ESC>l) procedures.
   3. Allow ESC functions in local text in macros.
   4. Improve DROPOUT handling.
   5. In CALC, allow <backspace>.
   6. In CALC, beep on illegal keystroke.
   7. Allocate as review memory smaller of 64k or 80% of maximum available.
   8. CALC will return hex code, if in hex mode.
   9. CALC result will show on line 25 where it won't be wiped out by CAPS.
  10. CALC now allows the minus sign to negate the accumulator, of no operand.
  11. Allow cursor-relative rectangle specification on KEEP, BOX, WINDOW,
      FILL, MENUBAR, PICK, PRINT, i.e.,
            KEEP 1 80 .-5 .+5

```
    12. Make sure all interrupt vectors are kosher during RUN operation via
        Turbo PASCAL's new 'swapvectors' command.
    13. Bug in INTERPRET was duplicating last character.
    14. Allow 0-length line to be transmitted to UNIX.
 *  15. Xon/Xoff - flow control observed in UNIX, TTY.
    16. Changes for UFT under unix.
    17. On screen scroll, maintain cursor position (showed up in unix).
    18. Prevent non-stop OVERFLOW ON RECEIVE messages.
    19. Optimize UFT-type transmission.
    20. On RUN of a program, don't write reminder "enter EXIT to return
        to ANZIO".
    21. Fiddle with memory allocation for RUN.  This allows the program to
        be compiled to allocate all available memory, thereby avoiding a
        problem with PROLOK.
    22. Bug fixed: buffered keystrokes were read by <F5> routine.
RELEASED 3-7-89
Changes in 9.1a
     1. Respond to <ESC>a<nnn>R<nnn>C positioning for ITX 6.1.
     2. Bug fixed involving clear-eol when positioned past 80.
     3. Respond to zero-intensity attribute (<ESC>0D).
     4. PROPOGATE ON/OFF controls whether screen attributes take a position.
Changes in 9.2
 *   1. TSR: STAY command
     2. Process and ignore <ESC>g... command to download function keys
     3. In F2 editor, when not in whole-line mode, hitting up- or down-arrow
        will send that code prior to CR.
     4. New command: F2 - allows line editor to be invoked from host.
     5. Allow TRANSMIT L=255 for longer UFT records.
 *   6. Allow TOGGLE or SWITCH to change boolean parameters; i.e.,
            LOCK TOGGLE.
     7. Fix bug in wrap logic.
     8. Bug fixed: function entry on line 25 didn't work when PANned.
     9. Bug fixed: GAUGE string didn't work when PANned.
    10. Disallow TYPE with no file name.
    11. On virgin startup, name of key file will now include full path.
Changes in 9.3:
 *   1. Variable terminal type, supported by
            TERM <xxx>
        where <xxx> is one of N7900, N7901, VT100, or WYSE50.
 *   2. Make 7900 (field-type) attributes more accurate.
 *   3. Modify TSR routines (TPTSR.ASM) so that same key sequence can be
        used to initiate and exit.
 *   4. Change standard hotkey to alt-F1 (83B);
     5. Improve screen updating under DesqView.
Changes in 9.3b:
     1. Bug fixed: caused some corruption when going from WIDTH 80 to WIDTH 132
     2. Bugs fixed: DIAL, FILL, BOX, etc., when entered at bottom of help
        screen, will first restore live screen.
     3. Bug fixed in FILL, BOX, and MENUBAR involving video attributes.
     4. Make MENUBAR, F2 commands wait for keyboard unlock before proceeding.
 *   5. MERGE command: same as READ, but doesn't change default key file name.
     6. In F2, up-arrow or down-arrow is appended to string when hit, ONLY IF
        invoked from host.
 *   7. Improved VT100 - supports "cursor mode" (alternate codes for
        cursor keys.
 *   8. Enable transparent print in Wyse50, vt100 with <ESC>3.  Note that in
        7900 mode, transparent print is activated with <ESC>3, not <ESC>8.
```

```
*  9. Support keyboards with <F11>, <F12>.
Changes in 9.3c:
   1. Improve defaults in SYNC.
   2. Bug fixed in display after returning from MENUBAR.
Changes in 9.4:
   1. Kermit transfer protocol - commands: KSEND, KRECEIVE, KCOMMAND (not
      yet perfected).
   2. When download encounters problems, such as full disk, make
      abort easier.
   3. Was beeping too much on macro keys.
   4. Bug introduced in 9.3b - keystrokes lost in space.
   5. Clean up vt-100 graphics.
*  6. New command: MODE-132 tells ANZIO what hex bios mode corresponds to
      132-column.
*  7. Add recognition of escape sequences to switch to 132-column, 80-column
      modes in WYSE50, N7900.
*  8. Alt-H generates help screen.
   9. Prevent blowup when program asks for initial parameters.
  10. Program asks for initial term type.
  11. If host program sends OPENI/S command, and an input file is already
      open, close it.
* 12. New commands: KEEP/N and PRINT/N same as KEEP and PRINT except no
      return-linefeed after each line.
* 13. New command-line parameter limits REVIEW memory used, to free up
      more memory for RUN, STAY:
          ANZIO /M:nnnn
      where nnnn is in the range 16384 to 65504.
  14. SCREENMODE 132 sets to 132-col mode, of MODE-132 is set.
  15. Alt-H does online help (HELP INDEX).

Changes in 9.5:
   1. Program detects when you OPENO a device name, such as AUX or PRN,
      and doesn't force you to use OPENO/N.
   2. DIR/S returns DIR's selected filename to host.
*  3. Allow DIR/S, MENUBAR in function in macro, i.e.:
          <F6>OPENI <F6>DIR/S|#||
   4. Allow more than three columns in a MENUBAR.
*  5. HELP INDEX allows user to select item for more help.
   6. Various Kermit improvements.
   7. Improve SETCOLOR NORMAL for different attribute schemes.
   8. Allow BAUD 28800, 38400, 57600.
   9. Allow DELAY, LINE DELAY to go to 65535.
  10. Speed up escape sequence recognition.
* 11. Alt-H produces HELP INDEX from a variety of places.
  12. Allow UFT download with up to 2k displays.
  13. Correct cursor size problem in some models.
* 14. STAY/G - same as STAY, but saves memory for graphic save.
* 15. Alt-M brings up "menu" screen (F5 help screen).
* 16. Alt-X terminates program.
  17. Bug fixed: download from UNIX would timeout at slow baud rates.
* 18. Allow: TRANSMIT TRAILER <DEL> for UNIX.
Changes in 9.5a:
   1. Initialize string used for RETRANSMIT.
Changes in 9.5b:
   1. Don't timeout in data reception.
   2. Add correct pass-thru print code (<ESC>[5i) to vt100.  (Still contains
      <ESC>3).
```

```
     3. Improve pass-thru print logic.
     4. Allow DEFINEing keys on numeric pad. NOT FINISHED
Changes in 9.5c:
     1. In Wyse 50, ESC ` A is normal protect character, ESC ` 6 is reverse,
        ESC ` 7 is dim.  Took out erroneous ESC !.
     2. In VT100, added ESC H for set tab.
     3. Add Insert char, Insert mode, Delete char as appropriate.
     4. Correct VT100's scroll region handling.
     5. In Wyse 50, "ESC *" and "ESC ," are clear screen, protect off.
     6. In MONITOR mode, put FRAMING, BREAK, etc. in line.
     7. Restore CTRL-BREAK = BREAK.
     8. In WYSE50, recognize ^X (hex 18) as transparent print on, cancelled by
        DC4 (which also cancels DC2).
     9. In transparent print with UNIX and RMCOS, send XON/XOFF characters
        without looking at incoming XOFF.
    10. ANZIONET version created, to run on Novell Network Async Comm Server.
Changes in 9.5d:
     1. Compile under Turbo Pascal 6.0.
*    2. Support 16550 UART with FIFO.
     3. Don't force to uppercase anything following RUN or RUN/N command.
Changes in 9.5e:
     1. Allow additional comm port options.  Port can be from 1 to 10,
        17 to 26.  Ports translate as follows:
            COMM PORT    BASE I/O ADDRESS (hex)
                1              3F8
                2              2F8
                3              3E8
                4              2E8
                5             3220
                6             3228
                7             As determined by BIOS, stored at 40:0000
                8             As determined by BIOS, stored at 40:0002
                9             As determined by BIOS, stored at 40:0004
               10             As determined by BIOS, stored at 40:0006
        Interrupt vector (IRQ) is 4 for odd numbered comm ports, 3 for even.
        To reverse that, add 16 to comm port (i.e., port 19 would be 3E8
        and IRQ 3)  (see 9.7 below)
Changes in 9.6:
     1. Overlays. (not yet completed)
     2. Merge Kermit code into one unit.
     3. Don't force to uppercase anything following RUN or RUN/N command.
*    4. Upgrade WYSE50 to WYSE60:
            ESC e 0 means propogate on.
            ESC e 1 means propogate off.
            Various codes for graphics character set
            ESC d . means wrap off
            ESC d / means wrap on
            ESC d # means transparent print on
            ESC Z... means define key
            ESC w <x> means display page <x>
            ESC y   means clear eos
            ESC cN  means make box
            ESC cG  means make box
            ESC cF  means fill area
            ESC cH means clear area
            END key generates <ESC> T
            ESC ; means erase screen
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              ESC : means erase screen
              Needs:
                  ESC z ... means define function key
                  ESC <ctrl-whatever> prints low ASCII
  *  5. Enhance VT100 toward ANSI and VT220 standards:
              ESC [ <n> L inserts lines
              ESC [ <n> Z means backtab
              ESC [ <n> P means delete chars
              ESC [ <n> M means delete lines
              ESC [ <n> @ means insert chars
              ESC [ <n> S means scroll forward
              ESC [ <n> T means scroll reverse
              ESC [ <n> G means go to position
              ESC [ <n> d means go to line
              ESC [ 1 K   means erase to beginning of line
              ESC [ <n> E means down <n> lines, col 1
              ESC [ <n> F means up <n> lines, col 1
              ESC [ <n> I means TAB <n> times
              ESC [ <n> X means erase <n> characters
              ESC [ <n> b means repeat last character <n> times
     6. Recognize certain escape sequences from "wrong" term type and
        switch automatically.  (subject to "ifdef AUTOTERM")
     7. Use MYCRT unit. (need to test use of myreadkey in return from RUN)
     8. Bug fixed: in VT100 graphics mode, still print other characters.
     9. Restore ability to do 43 or 50-line screen.
    10. If user tries to RUN a file other than a COM or EXE file,
            use COMMAND.COM to do it.
Changes in 9.6a (3-16-92):
     1. Fixed bug: when TIMEOUT happened when receiving UFT data,
        corruption or lockup happened.
     2. Add to VT100:
            <ESC>[..f   alternate form of cursor positioning.
     3. Change name on Wyse50 emulation to Wyse60.
Changes in 9.6b (4-8-92):
     1. For ANZIO14 version, if status returned from INT 14 contains
        hex 1000, terminate ANZIO.
Changes in 9.6c (5-6-92):
  *  1. New commands: FIND/S <filespec> returns first filename meeting
            spec. FINDNEXT/S returns next. Directories include trailing
            slashes.
Changes in 9.6d (5-26-92):
     1. Fixed bug in responding to "set tab" escape sequence.
     2. INTERPRET wasn't working if scroll region was set.
     3. Enhance viewpoint (N7901) support:
            <ESC>H for graphics character
     4. For Wyse60
            Ignore <ESC>A - sets message field attribute (used for "flash")
Changes in 9.6e (6-16-92):
     1. Fixed several problems in Wyse60 alternate character sets.
     2. Have Wyse60 mode ignore unimplemented escape sequences.
     3. For Wyse60:
            ESC <control-char> means print the control char.
            Fixed bug in "box" logic for <ESC>cN.
  *  4. Do XON/XOFF handshake to suspend host output if buffer almost full.
        Issuing ctrl-S at keyboard suspends output, ctrl-Q resumes.
     5. SCROLL parameter now also applies when we do a clear to end-of-screen
        from line 1 column 1.
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*  6. New command: RESET resets terminal (reissuing TERM command
       does the same):
           character sets
           attributes
           wrap mode
   7. Status-return (i.e., from OPENO/S) is now eligible for RETRANSMIT.
*  8. Alt-F brings up "Function" prompt on live screen, like F6 does
       if not over-defined.
   9. DIR/S now returns name in lower case - better for UNIX. For instance,
          recv-uft -t <F6>dir/s|#|
  10. Restore operation: if user entered ANZIO NONE, don't read any key
          file.
Changes in 9.6f
  1. In vt100 mode, ignore <ESC>#<whatever>, used for double-high,
     etc.
  2. Respond to cursor position request:
          vt100: <esc>[6n
          wyse60 : <esc>?
                   <esc>b
  3. Restore (again) ctrl-break = break.
  4. Improve Xon/Xoff handling.
  5. In ANZIO14, set baud rate, etc.
Changes in 9.6g
  1. Xon/Xoff improvement (Transparent print routine won't override COMM
     driver's XOFF)
Changes in 9.7:
* 1. DELAY and LINE DELAY are now machine-independent, in units of 10
     microseconds. Thus a LINE DELAY of 2000 yields a 20 millisecond
     line delay. During migration, old values are ignored.
  2. The timer used in WAIT and to time BREAKs had become inaccurate
     on fast machines. This has been fixed.
* 3. Allow commands to ANZIO to be sent from the host prefixed by
     hex 1C or 1E. Suffix can be 1D, 1F, or, as before, 13 (DC3). This
     should clear up problems working with some modems and muxes.
  4. Separate ctrl-Break from F10, so that if F10 is redefined, Ctrl-Break
     continues to work.
  5. In ANZIONET (6B version), fixed bug that caused some lost data.
  6. In ANZIO14, correct BREAK handling, allow setup with BAUD 19200,
     other features of BIOS Extended Init.
  7. Integrate ANZIOWIN code.
* 8. In ANZIOWIN, the old SYNC setting governs how the screen will be
     updated during scrolling, when we get a ways behind the incoming data.
  9. DIR/S will now return full path name of selected file.
*10. DIR and DIR/S will allow you to navigate through subdirectories.
11. New parameter IGNULL causes incoming null characters to be ignored
     (except in file transfer, etc.). Parameter does not show on help screen
     and is normally false; should only be used on advice from RSI.
12. New command DELAY/S sends delay, line delay values to host.
Changes in 9.7a:
  1. Add support for upper-pc character set in vt100 emulation, as in Kermit,
     invoked by <ESC>)?.
  2. Add support for vt220 alt char codes invoked by <ESC>n, <ESC>N,
     <ESC>o, <ESC>O.
  3. Fixed bug: wasn't restoring line 25 when setting to 80-col mode if
     already in 80-col mode.
Changes in 9.7b:
* 1. Add a parameter, IRQ, indicating which interrupt line is used by the
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serial port. This allows the user to explicitly set the interrupt
vector, in cases where their comm board is not set according to
standards.
 2. When printing out HELP and INTERPRET screens, use underlines to
    indicate highlights.
Changes in 9.8:
* 1. WAITFOR command: WAITFOR <string> [<timeout>]. Can be abbreviated
    WF. Default time is 24 hours. Can be interrupted with any F9 key.
 2. String entries in functions can be quoted, i.e., "abc def".
* 3. Alt-A can function as "panic button", "abort", just
    like any F9 key.
* 4. INVOKE and CALL commands: INVOKE <c> causes macro key c to be started,
    with no return to calling string. CALL is similar, but returns.
* 5. SEND x1 x2 y1 y2. Sends contents of screen back to host. Y1 must equal
    y2. This can also send results into another function.
Changes in 9.8a:
 1. In Windows version, allow F10.
 2. In Windows version, substitute <shift><ctrl><F1> for <alt-F1>, etc.
 3. In Windows version, load fonts from 'dosapp.fon'.
 4. On initial screen, timeout 10 seconds or until keystroke.
 5. Under DOS 5, was blowing up if user tried to do RUN after STAY.
 6. ACTIVATE command.
 7. ANZIO API calls (DOS version only).
 8. In Windows version:
*   a) New command: FONT h or FONT hxw.
    b) Store separate font height & width for 80-col, 132-col modes in
       DEF file.
    c) On SCREENMODE 132, go to 132-column screen. Revert on SCREENMODE 80.
*   d) New commands: FONT LARGER, FONT SMALLER.
    e) Don't show irrelavent items on HELP screen.
 9. When user changes comm port, change IRQ automatically.
*10. New commands to make adjusting comm parameters easier:
        8N1, (equivalent to DATA BITS 8, PARITY OFF, 1 stop bit)
           8E1, 8O1, 8N2, 8E2, 8O2,
        7N1, 7E1, 7O1, 7N2, 7E2, 7O2
11. Bug fixed: <END> was undefined in vt100's alternate cursor mode.
Changes in 9.8b:
 1. Tek Graphics started
 2. Keep ANZIO14 from getting overflows
* 3. Improve pass-through print, especially for WP/UNIX:
        a) increase timeout to 60 seconds
        b) allow all characters (including 7F, FF) in 8-bit mode.
        c) notify user when comm errors occur on pass-through print.
 4. Improve speed on receipt of redundant character encoding.
Changes in 9.8c:
 1. Big speedup in control-code recognition in VT100 mode.
 2. Make ANZIONET work with Novell's NASI 3.0.
Changes in 9.8d:
 1. Speed up handling of ANSI set-mode.
 2. Speed up handling of horizontal scroll.
 3. On READ of keys file, erase old definitions.
 4. RESET can be used to free the cursor when trapped in line 25.
* 5. New keystroke: alt-U is master unlock (like F4).
* 6. Introduce SMALL version of object, named ANZIOS:
        Designed to run as small as reasonably possible, for memory-resident
           operation
        No file transfer

No REVIEW
            Removed all non-essential functions
            Forces equivalent of "ANZIO /m:1"
            Rearrange code to minimaze stack usage
  7. For VT220, add recognition of additional modes in ESC [<mode> m:
            22 = normal
            24 = not underlined
            25 = not blink
            27 = not reverse
  8. Change name of VT100 to VT220.
Changes in 9.8e:
  1. Fixes related to WordPerfect graphics:
            a) Make it work on Hercules cards
            b) Fix bug that occurred on second display
            c) Work correctly if user hits <F5>, <alt-M>, <F6>, <alt-F>, <alt-x>,
                etc. while in graphics mode.
  2. Change default tab stops to every 8 columns.
* 3. Provide cursor line/position indicator if GAUGE is ON, and not SMALL
      version, and not DEMO version.
Changes in 9.8f:
* 1. Allow IRQ in range 2-7, 10-15
Changes in 9.8g:
  1. Fixed problem involving large amounts of pass-through print.
Changes in 9.9 (AnzioWin)
  1. Added FileDialog calls and correctly checking menu items during
     MyWinMenInit call after MyWinMenus
  2. Correct MenuItem Strings for files to match files to close if file is
     opened.
  3. Within CreateWinProc, of MyWinCrt, added MyWinMenInit.
  4. Within Init_Param2, of Funcs3, added MyWinMenInit after parameters loaded.
  5. Correctly checking menu items each time come back from a Menu message.
  6. Changes to EnumFont of MyWinCrt and to MyWinMenInit for correctly checking
     menu items.
  7. Moved FontInfo and related constants to vars.pas.
  8. Added windows MessageBox for function_error/misc_error in funcs0.
  9. Added capabilities for 'Save Def' and 'Save Keys' to first call a Windows
     MessageBox on close, and if Yes to save, then call the proper File Dialogs
     (funcs3).
10. Checkmark Monitor in menu when in use.
11. Dial dialog now asks for retry/wait.
12. Fix About dialog for AboutBox to include file names and DemoAboutBox if
     ifdef is NCR or DEMO
13. Clear Wait, Trailer, Sleep, Dial and Delays dialogs before performing
     process_function
14. Set Wait and Sleep to go to process_function with proper wording
15. Set Trailer initial value
16. Rearrange File and View menus, group logically
17. Correctly select About (demo or normal) and added About Support
18. Changed opening menu to display About and remove it on mouse move or
     keydown
19. Changed Font menu items to enable/gray Large/small font if already at its
     limit
20. In Windows version, allow things like RUN COPY.
21. Corrected problem with StringIn dialog receiving and getting values
     correctly, separated this into IntegerDialog and StringDialog.
22. Added menu item for View/Font/Custom Size.
23. Set up to correctly enumerate fonts.

24. Make PRINT, KEEP, etc. work in Windows (do WIN_READ_SCREEN_LINE).
25. (Did WIN_GET_SCREEN_LINE, but apparently not accessible)
26. Added Windows "Printer setup", "print screen"
*27. New command: EJECT ejects printer.
*28. PRINTER name of WPRN means write to Windows printer driver.
*29. New command (Windows only): PRINTFONT <sss>, where <sss> is
        <height> or <height>X<width>
30. Corrected problem with ALT-F in myWinCrt (WindowSysKeyDown).
31. Corrected problem with manually entering Logged Directory name.
32. Added Startup dialog (InitBox) to be called when no DEF file exists.
33. Use Windows 3.1 approach to printing.
34. Disable menu items when not appropriate.
35. Allow only key events on "keypressed".
36. Allow all events on "win_top_loop", (new), called from "communicate".
    Thus we should be able to enter most menu items only when appropriate.
37. Reference correct icon in RegisterClass.
38. During non-stop receipt of comm chars in "ncr_char", exit every
    clock_tick to allow screen paint, menu actions.
*39. Under Windows, SYNC controls how screen scrolling happens:
        ON   : User will see every line
        OFF   : Will scroll screen immediately, update bottom when there
                is time
        FAST : If ANZIOWIN gets "behind", it will repaint the entire
                screen
40. Under WINDOWS, cursor (caret) height is GetSystemMetrics(SM_CYBorder)
        (but not less than 2).
41. WIN: Add accelerators for
            Alt-X = quit
            Alt-U = Unlock
            Alt-B = Break
            Ctrl-Break = Break
            Ctrl-Ins = Copy
            Shift-Ins = Paste
            Alt-A = Grand abort
42. In Windows, allow CURSOR BLINK OFF.
*43. Allow specification of printer font, as:
        PRINTFONT <h>[X<w>] [fontname]
44. Use COMMDLG.DLL for file opens.
45. Use COMMDLG.DLL to choose printer font and size.
46. In Windows, RUN will cause the ANZIOWIN window to be suspended until
    the created appication (window) terminates.
Changes in 9.9b (WINDOWS):
* 1. When user hits "zoom" or "maximize" box, go to full screen, pick largest
    font that fits, add vertical spacing if necessary. Vertical spacing may
    mean line-drawing set doesn't line up well. Store ZOOMED state in
    parameter file.
 2. Bug fixed: wasn't finding all available system fonts.
 3. Bug fixed: Attributes were not always maintained properly.
 4. Always clear lines using ANZIOWIN's "normal" color.
 5. When SYNC was set to FAST, screen sometimes didn't get updated.
Changes in 9.9c (WINDOWS):
 1. Use common dialog box for PRINTER SETUP. This allows selection of which
    printer, as well as other specifics.
 2. If a print page is open when user does PRINTER SETUP or END, flush the
    page.
 3. Include ability to print to file via Windows' drivers.
 4. Add some accelerators, clean up menu.

5. Allow RUN of command without ".COM" or ".EXE" without reverting to DOS APP.
   6. Fixed BROWSE dialog so it could be exitted via ESC or from system menu's
       CLOSE.
   7. If specified printer font size is 0, select that printer's default font.
   8. More info on Windows COMM errors (BREAK, FRAMING, OVERRUN, PARITY)
   9. Make accelerators work whether CAPS is on or off.
  10. On COPY TO CLIPBOARD, copy both a text image and a bitmap.
  11. Remove unimplemented menu items.
  12. Add ability to highlight a column, for COPY.
 *13. New command: LAUNCH - like RUN/N, but control returns to ANZIOWIN (doesn't
      wait for other program to complete).
  14. Add menu item for SYNC.
  15. Disallow menu items at Function prompt (F6 or Ctrl-Shift-F)
  16. Optimize screen painting.
  17. Optimize serial communications handling.
  18. Ensure that errors during startup don't get erased before
      being seen.
  19. If program is invoked with startup macro, don't display title box.
  20. Bug fixed involving character insertion, deletion.
 *21. Windows print routines (WPRN) will now deal with backspace, such
      as for underlining. Overall, WPRN can deal with the following conrol
      codes (in hex):
          08 : backspace
          0A : linefeed
          0C : formfeed
          0D : return
Changes in 9.9c (General):
* 1. Improvements in DIAL function:
          a) Change approach to work with verbal, rather than numeric, responses.
          b) Compatibility with wider range of modem responses. Recognize failure
             responses NO CARRIER, NO DIALTONE, BUSY, NO ANSWER. Recognize as
             success anything starting with CONNECT.
          c) Compatibility with "progress" responses: RING, DIALTONE
          d) Make progress display subject to RECEIVE QUIET.
          e) Fixed bug: sometimes after DIAL, output to screen could not be seen.
  2. Don't force to uppercase these commands: INVOKE, ALL, WF, WAITFOR.
* 3. Store last DIAL information in parameter file. If user issues command to
     DIAL without parameters, last values will be used.
  4. Fixed bug (introduced in 9.8) involving command-line parameter
     to execute a macro.
Changes in 9.9d (Windows):
  1. Handle situation where no Windows default printer is defined.
  2. Fixed bug: highlights weren't always getting removed.
  3. Enhanced RUN command: if we say RUN <fn>, it wasn't finding fn.BAT
     (also applies to LAUNCH)
  4. When saving defaults or keys, bring up correct assumed directory.
  5. Added accelerators for 80x24 (alt-8) and 132x24 (alt-1)
* 6. Added a menu option for a block cursor.
  7. Allow COPY to be done at virtually any time.
* 8. Added BACKGROUND BITMAP capability. Designed for 256-color video only.
     User can select a bitmap (usually 256 colors) for use as a background.
     User can then click or drag with RIGHT mouse button, where different
     points on the screen represent different combinations of brightness
     and contrast. All settings are saved in defaults file.
Changes in 10.0:
  1. Better handling of case of illegal PRINTER name.
  2. In WINDOWS versions, default PRINTER name is 'WPRN'.

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  * 3. For network connections, allow a command-line parameter:
          /H:<hostname>
    4. WINDOWS: Allow "Abort" from opening dialog asking for params.
  * 5. NET: Ask for host name if appropriate
  * 6. NET/WINDOWS: Provide menu option for RECONNECT. If RECONNECT is
          ON, then when UNIX closes the connection, ANZIO will issue a new
          CONNECT.
  * 7. NET/WINDOWS: provide menu option for HOST NAME.
    8. Don't ask for BAUD, PORT on startup if NET version doesn't need it.
    9. NET/WINDOWS: Gray out BAUD, PORT menu items if not needed.
  *10. New command: RECONNECT [ON|OFF] only has effect on network connections.
   11. DOS non-NET version: error in comm routines caused poor performance
        when using high IRQs.
   12. DOS non-NET version: detect when IRQ is set wrong. (Later removed)
   13. Report more informative error messages on communication initialization.
   14. On receipt of UFT transfer, if we get an "out of sequence", abort the
        transfer.
  *15. Create version for WINSOCK (Windows Sockets).
   16. WINDOWS: speed up scrolling by using FMOVE instead of MOVE.
   17. WINDOWS: Fix bugs involving error messages on startup.
   18. WINDOWS: fix bug involving REVIEW - cause blowups, lines out of place.
Changes in 10.0a
1. Add 'ESC a' cursor positioning to N7901 emulation.
2. Bug fixed in DIAL (bug introduced in 9.9c).
3. Indicate invalid functions received from host.
4. Command REC is equivalent to RECEIVE (QUIET).
*5. Command CD is equivalent to LOG.
6. Allow changing BAUD, PARITY, DATA BITS, STOP BITS without "dropping"
   the serial line.
7. Allow Ctrl-delete as keystroke in DOS, WIN
8. Allow alt-delete as keystroke in DOS only.
9. Switching from 132-column mode to 80-column mode now changes logical
   width back to 80. To set for virtual-132 mode, you must be in 80-column
   mode and do WIDTH 132 (this should rarely be necessary).
10. Bug fixed in WIN: switching from 132 to 80 column mode inside help
    screen blew up.
11. WIN: fixed bug in demo behavior.
12. Make runtime parameter /H:<hostname> override a host name in
    the parameter file.
13. DOS version: improve 16550 support:
        a) reset interrupt controller immediately
        b) former handling was interfering with Kermit routines
Changes in 10.0b:
 1. In "VT220" mode, respond to ESC [ 12 m to set graphics mode as in
    SCO ANSI console and AT386.
Changes in 10.0c:
 1. WIN: Bug fixed - could blow up when writing to a printer
      directly.
 2. In COLORS screen, for VT220, refer to "bold" rather than "1/2".
 3. WIN: Change titles in message boxes from "Error" to program name.
 4. Bug fixed: could blow up on illegal BOX command.
 5. WIN: bug fixed: horizontal scrolling could scramble.
 6. WIN: bug fixed: sometimes wouldn't quit properly.
 7. WIN: bug fixed: alt-keys sometimes were not recognized.
* 8. WIN: when window is "unzoomed" or "restored", go back to previous
      character size, without scrollbars if possible.
 9. WIN: Be sure that border gets painted after changing colors.
```

10. Allow ESCape from COLOR screen.
11. DOS: Removed BAD IRQ test at comm initialization (added 10.0), as it
    didn't work on all machines.
12. DOS: Indicate an apparent BAD IRQ as a communication error.
13. WIN: bug fixed: background color left gaps when in full-screen mode,
    no bitmap.
14. WIN: fixed location of block cursor when in full-screen mode.
15. Bug fixed: modem noise could cause cursor positioning out of range,
    resulting in blowups in WIN.
16. Optimize display of repeated graphics characters.
17. WIN: bug fixed: Alt-A sometimes wouldn't get out of "stuck" loops.
18. WIN: bug fixed: insert mode caused corruption.
19. In N7901, enhance support for Wyse60-style graphics.
20. SOC: Bug fixed: wasn't doing WSACleanup at shutdown.
21. Improve timing of macros (startup macro sometimes had trouble with
        not getting implemented fast enough to catch a WAITFOR).
22. Allow setting TERM ANZIO (which is equivalent to TERM VT220)
23. WIN: Bug fixed: assumed directory for defaults file was WINDOWS\SYSTEM,
    now it is the program's directory (also affects ANZIOWIN.HLP).
24. WIN: Speed up "jump scrolling" when SYNC is FAST.
*25. NET: Put in special support for Novell's "TELAPI" for TCP/IP:
        a) recognize telapi
        b) do connection automatically
        c) recognize when Unix has dropped its end of TCP/IP and,
           if RECONNECT is ON, reconnect, otherwise quit.
        d) use HOSTNAME for connection. HOSTNAME can be initially
           specified in the command line with:
               anzionet /h:<hostname>
           It is then stored in the parameter file.
Changes in 10.0d (6-27-94)
  1. Incorporate updates in TSR routines from Turbo Pro 5.22. This should
     fix some problems with ANZIO going resident (STAY).
  2. DOS (TSR): Fixed scan codes for F11, F12.
  3. Corrected ANZIO.HLP regarding HOTKEY, for fixed scan codes.
  4. ANZIONET: If DELAY = 0, send to host in blocks, rather than a
     character at a time; particularly applies to file upload.
  5. ANZIONET: Speedup by using some assembler code.
  6. Improve info displays in Kermit file transfer.
  7. Make Kermit work with AnzioNet.
  8. Make Kermit work better with AnzioWin.
  9. WIN: Bug fixed: sometimes scrolled characters were wrong.
 10. SOC: Bug fixed in telnet protocol - was missing LF after CR.
 11. WIN: Bug fixed: initial selection of Viewpoint as terminal type was
     not handled properly.
 12. WIN: adjust window title.
 13. WIN: Bug fixed involving insert-line, delete-line.
Changes in 10.0e:
  1. Avoid certain problems when SCO host thinks we are an "ansi".
  2. Improve display speed in N7901, Wyse60 modes.
  3. WIN: Allow use of sound as in DOS version, based on PITCH variable.
     If PITCH = 0, uses Windows MessageBeep as before.
  4. VT emulation: deal with ESC [r w/out parameters
        (set default scroll region)
  5. WIN: bug fixed - sometimes got inverted rectangle when returning
     from dialog boxes.
  6. WIN: bug fixed in 7900 mode - attribute field was too long.
  7. WIN: bug fixed: COPY (to clipboard) sometimes didn't work.

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      8. WIN: notify user properly if comm port is unavailable.
*   9. WIN: If a region of the screen is highlighted, the menu's
       Print Screen command (alt-P) will print only the highlighted area.
Changes in 10.1:
   1. Begin work on allowing 25-line DOS emulation.
   2. Recognize and deal with following codes for SCO ANSI and/or AT386
      emulation:
          ESC [ .. a    Move right
          ESC [ .. e    Move down
          ESC [ .. `    Move to horizontal
          ESC [ 2 h     Lock keyboard
          ESC [ 2 l     Unlock keyboard
          ESC c         Clear and home
          FF            Clear and home
          ESC Q ...     Download function key (ignored)
          ESC [ s       Save cursor
          ESC [ u       Restore cursor
          ESC [ = .. C  Set cursor
          ESC [ 11 m    Set mode to print any PC character
   3. For SCOANSI and AT386:
          Assume WRAP ON.
          Print DEL character as little house.
          Handle color changes vs. monochrome attributes correctly.
          Remove "autoterm" ability to recognize and switch TERM types.
   4. Change behavior of ANSI-style "reverse" - now, if absolute colors
      have been indicated, just swaps foreground/background.
*   5. Now allow TERM SCOANSI or TERM AT386.
Changes in 10.1a:
   1. Fix bug (introduced 10.1) in 25-line mode.
   2. In SCO, recognize:
              ESC [ 2 i        send screen (ignored)
              ESC [ = .. B     set bell (ignored)
              ESC [ = .. D     set intensity (ignored)
              ESC [ = .. E     set blink (0) vs. bold backgnd (1) (ignored)
              ESC [ = .. A     set overscan color (ignored)
              ESC [ = .. F     set normal foreground color
              ESC [ = .. G     set normal background
              ESC [ = .. H     set reverse foreground
              ESC [ = .. I     set reverse background
              ESC [ = .. L     fill region with atts (ignored)
   3. Do better job of ignoring undefined control sequences.
   4. Use larger "bullet" character in VT220 set.
Changes in 10.1b:
   1. For SCOANSI terminal, reset blink on ESC [ m.
Changes in 10.1c:
   1. During reception of pass-through (transparent) print, allow keystrokes
      to go to host.
   2. Speed up check for keypressed.
Changes in 10.1d:
   1. WIN: Make sure window gets redrawn on font change.
   2. WIN: Various bugs fixed involving Copy to Clipboard
*   3. New command: MKDIR <dirname>
          (makes directory)
*   4. New command: MKDIR/S <dirname>
          returns 00 if OK, 01 if fails.
*   5. New command: COPY <fname> <newname>
          (note: will blindly overwrite existing <newname>)
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              (will not work if <newname> is a directory)
   6. Deal with incoming character 255 (occupies a space)
Changes in 10.1e:
   1. Make sure we can send out ctrl-_ (= hex 1F) and ctrl-^ (= hex 1E)
      and ctrl-] (= hex 1D).
   2. WIN: make sure we don't show two identical font sizes.
*  3. WIN: add menu item to Zoom/unzoom window. Alt-Z is accelerator.
   4. WIN: produced a version to work with EVERCOMM.DLL.
   5. WIN: Allow a SMALL version - just the basics.
   6. WIN: Changed initial screen font size to 8x12.
Changes in 10.1f (11-23-94):
   1. WIN bug fixed: small version could blow up on change to 132x25.
   2. Cleaned up attribute problems introduced in 10.1 and following.
   3. RESET command resets terminals "scroll region" also.
   4. Bug fixed: switching from 132 to 80 could lose screen data.
   5. Improvements in 25-line vs. 24-line modes.
   6. Evercomm version renamed "CrowTerm" and "CrowTerm Lite"
   7. CrowTerm doesn't do initial parameter menu; assumes VT220, UNIX.
   8. Changed preferred name of "N7901" to "VIEWPOINT"
   9. WIN: bug fixed: when Sync=fast, sometimes didn't clear to end-of-line
      when scrolling.
Changes in 10.1g:
   1. Bug fixed in underlined printout.
   2. ANZIOSOC: allow connecting to host by IP address, even if not in HOSTS
      file.
   3. Bug fixed in VT220 "insert spaces".
   4. More improvements in 25-line vs. 24-lines.
         (In Windows, space is always allocated for the status line,
            whether used or not)
   5. Change "EVERCOMM.DLL" to "CROWCOMM.DLL".
   6. CROWTERM: disable display of BAUD, etc. in "help" screen.
   7. CROWTERM LITE: Remove "alt-M for Help" from status line.
   8. DOS: remove "BAD IRQ" message.
   9. WIN: add pass-through print support (to WPRN only) to
      small (LITE) versions.
  10. TEK graphics cleanup (used mainly by Word Perfect/Unix):
         a) DOS: ignore COMM errors in TEK mode
         b) DOS: send XOFF just before going to TEK mode
*        c) WIN: add TEK graphics to Windows versions
         d) DOS: ignore palette settings, because they cause overruns
            on some video boards
Changes in 10.1h:
   1. Bug fixed in VT220 "insert space".
   2. More cleanup in TEK graphics.
Changes in 10.1j:
   1. WIN: bug fixed: dialog boxes wouldn't let you alt-tab away.
   2. WIN: provide some help for adjusting background bitmap, by means
      of a modeless dialog box.
   3. WIN: bug fixed: could cause blowup in using common dialog box
      routines.
   4. WIN: don't blink cursor if not "in focus" (active window).
*  5. SOC: display dialog box while connecting, allow cancel.
   6. WIN: bug fixed in recognizing ctrl-F12.
Changes in 10.1k:
   1. WIN: try to speed up scrolling when in FAST mode.
   2. WIN: make sure font resource gets removed.
   3. WIN: bug fixed: if user tried to save parameters with existing file name
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                such as "unix", it saved them as "unix.def".
     4. WIN: Bugs fixed in File Open.
*   5. WIN: Allow SCREENMODE command to specify a general format
                <cols>X<rows>
     6. SOC: Improve dealing with WINSOCK (especially Trumpet) when trying to
        send character during massive incoming data, on slow PCs.
Changes in 10.2:
     1. WIN: Various optimizations in display, scrolling
     2. WIN: If SAVE KEYS and/or SAVE DEFAULTS have been removed from the menu
        with a resource editor, the program will not ask to save that item on
        exit.
*   3. WIN: Implemented PASTE of text data from clipboard to host.
     4. SOC: Optimize, by reducing calls to fetch_from_comm.
     5. WIN: Bug fixed in COPY of partial line(s) to clipboard.
     6. WIN: Added COPY to SMALL (LITE) version.
     7. WIN: On COPY, don't include CR/LF on last (or only) line.
     8. WIN: Added REVIEW to SMALL version.
     9. WIN: In LITE version, use standard Windows cursor, not the artificial one
        needed with background bitmaps.
Changes in 10.2a:
     1. For VT220 emulation (and derivatives), coded into program the
        following keys, for which a keys file is now no longer needed:
            PageUp = ESC [ 5 ~
            PageDn = ESC [ 6 ~
            Insert = ESC [ 2 ~
     2. Improve highlighting with mouse.
Changes in 10.2b:
     1. SOC: improve speed, especially with Trumpet Winsock, by dynamically
        testing methods of polling.
     2. WIN LITE: more memory for review buffer.
Changes in 10.2c:
     1. Hard-coded VT100 keys F1 - F4.
     2. Shrink code a bit.
     3. WIN: bug fixed in timing routines, when Windows has been running
        overnight.
     4. DOS: If MODE-132 is zero, and we want to display 132 columns, try VESA
        mode 109.
     5. Include VIDMODES.EXE
     6. Include VWPT.KYS, VWPT.DOC
Changes in 10.2d:
     1. Optimize escape-code handling, especially VT-style.
     2. If user enters command SAVE, and no keys file has been established,
        uses ANZIO.KYS.
     3. Optimize standard character reception.
     4. LITE: added font-sizing, zoom.
     5. WIN: optimize cursor handling.
     6. SOC: restore lost ability to detect dropped connection
Changes in 10.2e:
     1. SOC: check for dropped connection only once per second
     2. SOC: remove checks of WSAIsBlocking.
Changes in 10.2f:
     1. Fixed bug introduced 10.2d causing weird behavior at end-of-line.
Changes in 10.2g:
     1. WIN: better behavior on partial screen scrolls when bitmap showing.
     2. WIN: make sure we free up memory used by bitmap.
     3. SOC: remove some diagnostic messages left by mistake.
     4. CROWCOMM: up to 1.4
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     5. VT emulation: deal with ESC [ 0 ; 0 r (sets scroll region to entire
        screen)
     6. Allow space between parameters "/h:" and hostname, for use with
        Netscape.
     7. SOC (including Lite): use hostname as part of Window title.
     8. SOC (including Lite): allow hostname to include a "port" for telnet
        (default is 23).
     9. SOC: If user CANCELS out of CONNECT process, ask for new host name.
    10. LITE: On startup, after banner screen, remind user it's unregistered.
    11. WIN: On startup, don't display startup screen unless unregistered, or
        startup with no DEF file.
Changes in 10.2h:
     1. Corrections in VT220 emulation:
           a) Reverse index (ESC M) was wrong.
           b) Changing scroll region resets cursor to home position.
           c) Setting to 80 or 132 columns clears scroll region.
           d) Setting to 80 or 132 columns (from host) clears screen.
           e) Clear screen (ESC [ 0 J) shouldn't move cursor.
           f) Added erase to beginning of screen (ESC [ 1 J)
Changes in 10.2i:
     1. VT220: deal with (ESC [ ; r)
Changes in 10.2j:
     1. SOC: Fixed bug in dialog box asking for host name.
     2. WIN: bug fixed: when no characters in buffer, wait for a Windows event.
        This results in much lower load on the processor.
Changes in 10.3:
     1. In some "HIT ANY KEY" prompts, hitting a special key could cause
        spurious input.
*    2. Allow upper-ascii (ISO) characters to be sent to host.
     3. Allow macros to be attached specifically to numeric pad keys,
        "gray" keys.
     4. Make ctrl-@ (and ctrl-2) send out a null (hex 00).
        Make ctrl-dash send out a ctrl-underscore (hex 31).
        Make ctrl-6 send out a ctrl-^ (hex 30).
     5. WIN: be sure to kill timers on exit.
     6. SOC: improve handling of telnet protocol; avoid getting spurious character
             255.
     7. WIN: Double-clicking on title bar zooms/unzooms
*    8. WIN: Add menu item Backspace 127
*    9. WIN: Begin Windows help system
    10. WIN (serial): Be sure to drop DTR signal on startup
    11. WIN: Make ctrl-space send out a null (hex 00)
    12. WIN: Process TAB characters in Windows printer driver (WPRN).
    13. WIN: Changed menu item BACKSPACE 15 to BACKSPACE 21 (seldom used anyway)
    14. Make ctrl-H available, even if BACKSPACE is 127.
*   15. WIN: Change approach to jump scrolling:
           a) menu now refers to Jump Scroll off/medium/fast
           b) separate parameter item from DOS Sync
           c) New command: JUMP OFF | JUMP MEDIUM | JUMP FAST
           d) JUMP OFF shows every line
              JUMP MEDIUM suspends scrolling,
                 repaints when half a screen behind
                 and there are > 100 characters in the buffer
              JUMP FAST suspends scrolling,
                 repaints when an entire screen behind
Changes in 10.3a
     1. Finish changes to routines to read, write keys files.
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   2. Track better when keys file has changed.
   3. 8-bit character set is ISO for VT220, ANZIO, otherwise PC
      set.
   4. WIN: menu changes:
      a) Remove Sleep, Wait, as they only make sense in a macro.
      b) Rearrange items affecting serial ports
* 5. WIN: Program is now designed so that any menu item, even a whole
      column, can be removed from the .EXE (with a resource editor), and
      things will work correctly.
Changes in 10.3b:
  1. WIN: bug fixed in SLEEP command.
  2. SLEEP now interruptible by alt-A, not just any key.
  3. Bug fixed in handling of alt-A (grand abort)
  4. Fixed bug (introduced in 10.3) in F2, F3.
  5. Initial work on Kermit auto-download.
* 6. SOC: add option to pass terminal type.
  7. WIN: in menu for terminal type, distinguish between ANZIO and VT220.
  8. SOC: enlarge dialog box for host name, other strings.
  9. SOC: deal with telnet "echo" option.
 10. WIN: in zoomed mode, extend line-draw characters downward.
* 11. WIN: expanded Color menu into submenu with Standard, Reverse, and Custom
* 12. WIN: added Custom to Screensize menu - allows specifying variable number
      of rows, columns.
 13. SOC: added Communicate:TERM name option - if user puts in a string here,
      it will be passed as the telnet TERMTYPE when requested.
* 14. Respond to host request for terminal type:
      If Wyse 60, respond to ESC SPACE with "60" then CR
      If VT220 or related, respond to ESC Z or ESC [c or ESC [0 c
        with ESC [? 62 ; 1 ; 2 ; 6c
Changes in 10.3c:
  1. SOC: Correct sending of Window Size to host - allow one line for status
     info.
  2. WIN: Correct handling of Custom Screen Size for one line of status.
  3. WIN: Fix handling of font with custom screen size - now uses the
     132-column font if screen width is > 80 characters.
  4. WIN: Prevent setting screen width < 80.
Changes in 10.3d:
  1. LITE: fixed bug in setting TERM NAME.
Changes in 10.3e:
  1. WIN: Allow a BACKTAB (shift-tab) keystroke (used by Wyse).
  2. Fixed bug involving DEL key in CALCulator.
  3. Fixed bug in TERM command.
  4. Fixed bug in macro redefinition.
  5. WIN: Changed default Bold color to red on white.
  6. Wyse: Treat ESC 3 as "clear all tabs" (undocumented), so we don't hang
     on Unix "tset".
  7. Bug fixed: lost Alt-A as abort in 10.3.
  8. Fix "download" shell script (to version 1.1).
  9. Fix alt-F11, alt-F12 in ANZIOTIC.KYS.
Changes in 10.3f:
  1. SCOANSI: deal with ESC [<num> g : Print one graphics character.
  2. If we receive an escape sequence for 80-column mode, and we're already
     there, don't reset the screen (and WINDOW size).
* 3. Add automatic Kermit download to Anzio Lite.
  4. SCO: react to undocumented means of setting colors: ESC [2; fg; bg m.
  5. Wyse: react to ESC f ... define status line.
  6. Wyse: react to ESC z (... define status line.

7. Wyse: react to ESC z field ... label function key.
* 8. Discriminate TERM setting of Wyse50 vs. Wyse60 (difference is
      whether video attributes propogate).
Changes in 10.3g:
* 1. Track separately (for 80 and 132 column modes) whether user wants
      screen zoomed.
   2. WIN: Bug fixed: DELAY and LINE DELAY timing could be wrong on very fast
      machines.
   3. WIN: bug fixed: could get system freeze when unzooming the window.
   4. SCOANSI: programmed Backtab (in SCOANSI.KYS) to send ESC [Z. This
      matches what the SCO console sends, if patch SLS UOD369B has been
      installed.
   5. VT220.KYS: added an F5 definition. Effectively hides the old F5 help
      screen from neophyte users.
Changes in 10.3h:
   1. WIN: minor changes in font handling.
* 2. WIN: TITLE command (and Window Title menu item) changes window's title.
      Priority of titles is now:
               1) Specified title
               2) If a host name exists, program name plus host name
               3) Program name plus defaults file name
Changes in 10.3j:
   1. WIN: Improve font handling when called from Netscape.
   2. WIN: Change Standard color's BOLD UNDERLINE to $FC (Red on White,
      underlined)
   3. WIN: When printing with an ANSI font, convert characters. Line-draw
      characters come out as '+', '-', '|'.
* 4. WIN: Remember last window position (unless there are multiple instances
      running). Note: at this version, window may not stay positioned at
      extreme bottom of screen.
* 5. SOC: Improve handling of hosts that don't echo.
   6. WIN: changed behavior in positioning window if it would overrun the
      bottom or right side of the screen. Previously, it would revert to the
      center. Now, it will nudge only as far as necessary.
Changes in 10.3k:
* 1. SOC: Allow free resize of the window by dragging sizing bar. Sends new
      size to host, if it accepts it.
         a) Will not react to widths < 80, as those are illegal.
         b) Note that if width is > 80, program will use font size associated
            with 132-column mode.
Changes in 10.3m:
   1. SOC: Try host string as an IP address first, for speed.
   2. SOC: Show cancellable dialog box during host name resolution, in case it
      isn't working for some reason.
   3. SOC: When command line contains "/h:hostname" (with or without a space),
      if the next parameter string is numeric, treat it as a host number. This
      is designed especially for Netscape.
   4. VT220, etc.: allow more modes in a mode-setting string, i.e.,
      ESC [0 ; 35 ; 1 ; 47 m.
Changes in 10.3n:
   1. Bug fixed in responding to tab setting commands from host.
   2. For terminal types that support tab, set tabs to every 8 positions
      whenever we reset the terminal type.
Changes in 10.3p:
   1. Remove Kermit auto-reception, until further refined.
Changes in 10.3q:
   1. WIN: Make sure title box's timer gets killed.

2. Bug fixed: In VT220, character 0C is like a linefeed; in other
         Ansi-style, it clears the screen.
      3. WIN: Improve speed in handling erase-to-end-of-line, other space-fills.
      4. Removed prior feature of local flow-control, as it conflicted with some
         host programs, such as Emacs.
      5. Remove free resize capability -- caused an added line on startup.
      6. When command line parameter is 1 character long (ie., an auto-start
          macro), don't uppercase it.
      7. On Copy to Clipboard, make sure cursor doesn't show
      8. VT220, related: Recognize ESC [? 5 i as AUX PRINT ON, treat as
          transparent print. ESC [? 4 i turns it off.
      9. Remove old carryover from N7900: ESC 3 = transparent print, ESC 4 = off.
     10. SOC: If the Communicate:Network:Host name menu item has been removed,
          then disallow all prompts for host name. Thus if initial connection
          fails, the program will quit.
     11. In Kermit: allow aborting of initial state of file reception;
                   allow aborting with Grand Abort
Changes in 10.3r:
* 1. Allow command line parameter to define a macro (to be used as a
      variable):
         /D<k><space><string>
      where <k> is the key, <space> is optional, and <string> is the
      string. Thus if the macro "D" was predefined as
         <F6>dial <F6>call n||
      then the command line
         anzio D /dn555-1212
      would define the "n" macro, and execute the "D" macro.
* 2. WIN: New command: PASTE (does same as menu item)
* 3. WIN: New command: CLIP does copy to clipboard.
         CLIP by itself will copy the whole window, or
         CLIP <x1> <x2> <y1> <y2>
   4. Bug fixed in dealing with invalid rectangle specification
   5. Bug fixed: Grand abort wasn't killing macro.
Changes in 10.3s:
   1. Wyse: react to ESC / and ESC w ` by sending cursor page, line, col. For
      now, reports page as 0.
   2. Bugs fixed in Wyse response to cursor position request: ESC ? and ESC b
Changes in 10.3t:
   1. Kermit auto-reception: if we can't process the first packet, assume it's
      not really Kermit coming in, and bail out.
   2. WIN: Add menu item: Communicate:Kermit:Auto reception. When unchecked,
      will not go into Kermit logic on receipt of a control-A.
   3. Kermit auto-reception put back in.
   4. Lite: Unregistered version will now show banner dialog box for 15
      seconds, not allowing user action.
   5. Kermit bug fixed: didn't handle CRC check correctly (seldom used)
   6. Wyse: bug fixed in recognition of long escape sequences.
   7. VT220: Treat VT (hex 0B) as linefeed.
   8. Include keys files in downloadable (unregistered) version.

CAPPED AS 10.4 (9-21-95)
   Summary of Improvements Since 10.3d:
      * Many emulation improvements
      * Improvements in handling the connection phase in TCP/IP
      * Added Kermit auto-download, including in the Lite version
      * Added Wyse 50 emulation
      * Save and reset window position, zoom status for 80, 132

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        column modes.
      * Deal with non-echoing host systems
      * Remove local Xon/Xoff assumption, so it will work with Emacs
      * Add keys files to Lite Unregistered version
      * Macro language improvements (not in Lite):
          > CLIP, PASTE macro commands
          > Create macro/variable from command line


Changes in 10.4a:
  1. Bug fixed in Kermit reception in Anzio Lite.
  2. Bug fixed: Wyse started up with incorrect graphics-mode set.
Changes in 10.4b:
  1. Bug fixed (affected SCOANSI in vi) in insert at end-of-line.
Changes in 10.4c:
  1. Bug fixed (introduced in 10.3r) wouldn't allow text commands
     PRINT, KEEP
  2. VT220: respond to request for printer status ESC [ ? 15 n
     (currently always says ready)
Changes in 10.4d:
  1. VT220 bug fixed: reports of printer status, cursor position should
     not include RETURN at end.
  2. SOC: If WINSOCK doesn't support async name resolution, use sync.
  3. WIN: If "Font size" menu items have been deleted, don't insert
     font sizes.
  4. New command: "ENV/S name", sends environment variable to host
     (without RETURN).
Changes in 10.4e:
  1. WIN: add keystrokes (which can now have macros attached):
          Ctrl-Insert
          Ctrl-up
          Ctrl-Down
     Note: Use of Ctrl-Insert requires the user to remove the corresponding
     item from the Accelerators resource, using a resource editor.
Changes in 10.4f:
  1. Allow separate definitions of numeric-pad keys, active only when
     NUMLOCK is OFF.
  2. Provide new keys file "VT220N.KYS" (N for Native). Defines num-pad
     keys. Also codes as follows:
          PC key   VT220 key
          ------------------
          Num+      Num,
          Home      Find
          End       Select
          Del       Remove
     Note that F1-F4 still function as PF1-PF4.
Changes in 10.4g:
  1. Make sure DEF and KYS files are opened read-only.
  2. Restore ability to embed special keys in macros.
  3. Compile-time option of a special WINSOCK debug version.
Changes in 10.4h:
  1. Attempt to decipher bug in Lan Manager's Winsock.
Changes in 10.5:
  1. WIN: Change initialization dialog box to use listboxes, provide
     all emulation types.
  2. On fresh startup, load appropriate keymap file.
  3. WIN: On change of TERM type, remind user to load keys file.
  4. SOC: Ask for host name earlier.
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5. SOC: Change default value of RECONNECT to false.
    6. Transmit macro keys (function keys) faster.
Changes in 10.5a:
  1. VT220: Recognize and deal with 8-bit control codes.
  2. VT220: Ignore unknown codes more like the VT220 does
     (such as ESC [... ' z).
  3. WIN: Allow macros to be attached to additional keys:
        shifted cursor arrow keys
        shifted Home, etc.
        ctrl-Tab
        ctrl-shift-tab
     Note keystroke combinations involving Insert and Delete may
     conflict with accelerator keys, so they will only work if
     the corresponding accelerator keys have been removed from the
     EXE with a resource editor.
Changes in 10.5b:
  1. New capability and text command: FLUSHTIMER <x>. If we have printed
     something, and it's sitting in a Windows or network buffer, then after
     <x> seconds, we'll flush it out. Set FLUSHTIMER to 0 to disable. If
     <x> is low, such as 1, then print-screens will be ejected immediately.
     To get more than one image on a page, set the number high, or 0 to
     disable. For passthrough-print, if the end of the print stream means
     the end of a print job, set this low. On the other hand, if passthrough
     data comes in pieces, set it high or disable it.
  2. Windows passthrough print (through the WPRN pseudo device) no longer
     treat each page as a job.
  3. WIN: The Eject item on the menu now closes the page and the document.
  4. The EJECT text command works as before: if the printer is the WPRN
     device, it closes the page and the document. If a file or device,
     it writes a formfeed to it.
  5. New command: FLUSH. Close the document - same thing that happens when
     FLUSHTIMER times out.
  6. WIN: Allow definition of shift-BS, ctrl-BS, ctrl-shift-BS.
  7. VT220:
        * On receipt of SUB (hex 1A), display upside-down question
          mark
        * Deal with more VT220 8-bit codes
        * Origin mode (ESC [? 6 h)
        * Soft reset (ESC ! p)
Changes in 10.5c:
  1. VT220: Allow linefeed when we're past column 80.
  2. Initialize FLUSHTIMER to 5 seconds.
Changes in 10.5d:
  1. WIN: Bug fixed (introduced 10.5b) in Print Window.
  2. WIN: Command line parameter "/c" for choose - allows user
     to choose among available ".DEF" files on startup.
  3. Make INTERPRET show 8-bit data.
  4. Wyse, Viewpoint: fix behavior of "cursor-up" code at top
     of screen.
  5. VT220: Bug fixed in cursor-up.
  6. VT220: Bug fixed in cursor-down, linefeed outside scroll
     region.
  7. VT220: deal better with VMS's cursor positioning (position
     to column 81 acts like 80).
Changes in 10.5e:
  1. LITE: allow access to Auto-Linefeed, Block Cursor.
Changes in 10.5f:

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      1. LITE: bug fixed in auto-linefeed.
Changes in 10.6:
*  1. Kermit speedups:
         * Allow longer incoming packets.
         * Optimize outgoing Kermit packets for TCP/IP
           (fewer TCP/IP packets).
         * Negotiate 8-bit prefixing
         * Reset default parameters for each operation
   2. WIN: Create a unified version supporting serial, Winsock, Novell
      WLIBSOCK, PicLan (not finished at this release).
   3. In Interpret, for terminal types with 7-bit character sets,
      ignore 8th bit in display.
   4. Add C332 (VERSYSS) emulation.
   5. Change handling of "invisible" attribute.
Changes in 10.6a:
   1. Bug fixed: restored backspace capability in CALC (calculator)
   2. Improvements in C332 emulation:
         * Passthru print: start on ESC ; 6, end on ESC ; 1
         * Placing attribute field at column 80 now wraps to column 1,
            next line.
         * Make sure propogating attributes propogate to end of screen (or
            next attribute)
         * TAB character goes to next field (if cursor is on a field indicator,
           goes one to right)
         * Implement protected fields (clear unprotected clears from cursor to
           end of screen, leaves attributes in place)
         * Overwriting a field indicator causes previous field, and its
           attribute, to propogate
         * ESC A (cursor up) wraps at top of screen
         * Deal with status line commands
         * Reset (ESC K) also clears status line
         * ESC [ ? E 2 goes into VT220 mode
*  3. Improvements in printer control:
         * Store in parameter file whether to use default printer or a
           specific printer name
         * Store in parameters file the printer's
           DEVMODE, which contains various printer setup fields, such as
           orientation, draft mode.
         * Store whether to print to a file.
*  4. New menu item: File:Low-level print used for passthru print of
      formatted data. Use this setting when the host-based program
      formats the output for a particular printer type, with Escape
      codes for such things as bold print, etc.
   5. When a status line has been downloaded from the host, don't mess it
       up with NUM, CAPS, LOCK.
Changes in 10.6b:
   1. WIN serial: Add RTS hardware flow control on incoming data (cleared
       up some passthru print problems with "pine").
   2. WIN printing (WPRN): reset font after each page break. This fixes
       a problem with some printer drivers, where the font on passthru print
       would revert to default after the first page.
   3. WIN bug fixed: when window is going from iconic to zoomed, remove
      scrollbars.
   4. WIN bug fixed: when restoring from iconic, don't use scrollbars
      unless necessary.
   5. WIN bug fixed: when scroll bars are in use, would sometimes display
      partial characters.
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*   6. WIN: Make it possible to access various ALT key combinations, if
       they are not assigned as accelerators.
     7. Improve display of KEYS screen.
     8. Speedup in escape-code recognition in non-ANSI terminals (Wyse,
        C332, Vwpt)
Changes in 10.6c:
     1. WIN: In WPRN driver, if using LOW PRINT, don't translate characters
        if printer font is non-OEM.
*   2. Internationalization: Allow keystrokes to be sent properly in either ISO
       mode (if TERM is ANZIO or VT220) or PC character set (if TERM is AT386
       or SCOANSI).
     3. Allow FUNC prompt to handle extended-ASCII keys.
     4. C332:
          Respond to ESC y by returning ESC to host.
     5. Display KEYS in sorted order.
     6. Allow access to alt-home, alt-up, etc.
Changes in 10.6d:
     1. Begin work on National Replacements Characters.
     2. Bug fixed: macro playback of more than 20 characters to host at a time
        would blow.
     3. In unregistered Windows versions, print a message on bottom of each page.
     4. WIN bug fixed: couldn't handle PASTE greater than 64K.
     5. SOC, Lite: make sure telnet options get reset on reconnect.
*   6. WIN: Added Flush Timer to menu. See help file for more info.
     7. SCO ANSI corrections:
          Setting BOLD, then setting colors leaves bold in place.
Changes in 10.6e:
     1. For C332: when in VT220 mode, recognize:
          ESC [ ? E 1 to go back to C332 mode
          ESC [ ? C r to go back to C332 mode
Changes in 10.6f:
     1. For C332:
          * Bug fixed in switching emulation modes (would show foreign characters).
     2. Implement paging for C332, Wyse
     3. WIN: bug fixed: insert_line, delete_line could sometimes not fully clear
        the new line, in the review buffer.
     4. For Wyse50/60: Write-protect mode defaults to "dim" attribute
        (was reverse).
*   5. On SCO, in Wyse 60 mode, "mscreen" now works.
Changes in 10.7:
     1. WIN: Allow switching video driver to allow foreground, background
        brightness, for SCOANSI emulation.
     2. WIN: Bug fixed in low-level print.
*   3. VT220: Respond to codes for National Replacement Character sets (NRCs).
Changes in 10.7a:
     1. More improvements in NRCs.
     2. VT emulation:
          a) Deal with ESC [ ESC
          b) Cursor-right command should stop at right edge
Changes in 10.7b:
     1. WIN: Fix ctrl-space = null
     2. WIN: Make printer auto-flush work when "Low-level Print" is on.
     3. WIN: Allow sending, receiving characters from an outside application
        (used for CrowFlite).
Changes in 10.7c:
*   1. Enable National Replacement Character sets (NRCs), tracked in the
        DEF file. In WIN, shows as "Character Set" on menu. Text command is
```

"CHARSET <name>".
  2. If command-line parameter is "/c" to force the user to choose a DEF file,
     and the user hits ESC, quit program.
* 3. Command-line parameters can be in double-quotes, including open-ended.
        This is especially useful to define macros with embedded spaces, which
        can be used in firewall situations. For instance,
         ANZIOSOC /DC "hostname port
     would assign to macro "C" the contents "hostname port". This could then be
     used in a login macro, such as:
        <F6>Waitfor ogin|myname|<F6>Waitfor assword|mypass|telnet <F6>call C||
  4. WIN: Speedup gained by shipping programs compiled in Delphi.
Changes in 10.7d:
  1. VT220:
        ESC 1 " q   Write-protect on
        ESC 0 " q   Write-protect off
        ESC 2 " q   Write-protect off
        ESC ? <n> K Erase unprotected in line
        ESC ? <n> J Erase unprotected in screen
  2. Make sure data coming in for passthrough print is not translated
     or masked in any way, as it may be 8-bit data.
  3. In telnet sessions, be sure to throw away NULL after CR.
  4. Support keys F13-F20 (normal, shift, ctrl) on DEC LK450 keyboard.
  5. WIN: Improve TEK graphics mode used for Word Perfect/Unix support.
Changes in 10.7e:
  1. WIN: Behave properly when user shuts down all of Windows, such as
     closing communication session, saving settings, flushing printer.
  2. WIN: Connect vertical double lines when zoomed.
Changes in 10.7f:
  1. Bug fixed could lead to General Protection Fault on startup in Demo
     versions.
Changes in 10.7g:
  1. WIN: Bug could cause GPF with MS/Office 95 Toolbar.
  2. Further C332 enhancements.
Changes in 10.7h:
* 1. New command: MESSAGE <text>
     Displays a message box, requires an OK. Can be used to flash a
     message from the host.
  2. WIN: New command: PRINTLOW ON | OFF
  3. WIN: New command: CHOOSEPRINT
     Brings up printer selection dialog box, like File:Printer Setup.
* 4. WIN: New command: PLAYSOUND <filename.wav>
  5. LITE: Bug fixed (introduced 10.7d) in position of Block Cursor - left
     droppings on screen.
  6. WIN: Restore non-blinking cursor (CURSOR BLINK OFF) capability.
Changes in 10.7j:
  1. Wyse 60 protected fields.
  2. Restore ctrl-shift-2 sends null (hex 00).
  3. Add some Wyse enhancements to Viewpoint emulation.
Changes in 10.7k:
  1. C332: fix bug in line-insert, line-delete.
Changes in 10.7m:
  1. CROWCOMM, combined Windows serial: make sure modem gets hung up.
  2. Removed internal timer in passthrough-print routine that assumed 60 dead
     seconds meant we were lost.
  3. Added pass-through print indicator in bottom line.
  4. WIN: Bug fixed in print-to-file: could cause unwanted flush.
Changes in 10.7n:

1. Bug fixed in KEEP of part of screen.
Changes in 10.8:
*   1. WIN: Combined version with serial, TCP/IP, WLIBSOCK, and Piclan
       communication.
       * Can specify commtype in command line with
          /Tx
         where x is S for serial, T for TCPIP, P for Piclan, N for Novell
          WLIBSOCK
       * New command:
            COMMTYPE SERIAL or COMMTYPE WINSOCK
       * Indicates in title if we're NOT CONNECTED
       * Assume 8 data bits, no parity (was 7 even)
   2. WIN: Bug fixed: could sometimes get divide-by-zero error on startup.
Changes in 10.8a:
   1. WIN: Bug fixed (introduced 10.8) in print routines.
Changes in 10.8b:
   1. WIN: Avoid "xxx.DLL not found" messages in WIN 3.1.
   2. WIN: Clean up Comm Settings dialog box.
   3. WIN: Bug fixed in shutdown of PicLan.
Changes in 10.8c:
   1. WIN: Attempt to solve ghost problems of menus being corrupted.
   2. Change keystroke handling so characters 224 and 240 could be used.
   3. Fix in Wyse emulation: upper half of 8-bit character set maps same
      as PC.
   4. Bug fixed: non-blinking cursor would leave tracks when inserting,
      deleting lines.
*   5. WIN: Allow user to choose a screen font (previously restricted
       to Terminal).
       * Only fixed-space fonts are allowed, either TrueType
         or bitmap.
       * Gives a better fit when zoomed, particularly on large screen
         resolutions.
       * If the screen font is in the Windows character set (such as Courier
         New), linedraw characters displayed by the host will result in '+',
         '|', '-', etc.
       * Linedraw characters in some fonts may not fully connect.
       * If "Font is suspect" message appears, character alignment may not be
         correct.
       * User can choose a font with a different character set, such as
         Cyrillic. Note that if emulation mode is set to "VT220" or "Anzio",
         program assumes incoming characters are in ISO character set, and
         will translate. We suggest using "AT386" or "SCOANSI" (changed later,
         see 10.8j).
Changes in 10.8d:
   1. WIN: Bug fixed in DIAL dialog box
   2. WIN: Bug fixed: menu got scrambled if "Larger Font" item had been
      deleted.
Changes in 10.8e:
   1. WIN: In WPRN device, wrap lines if needed
   2. WIN: In COPY, COPY/S command, if output file is "WPRN", send it
      to the WPRN printer driver.
*   3. New command: PRINTFILE <filename>
   4. WIN: Print Wizard started (not released yet).
   5. WIN: In WPRN driver, on setup error, make it more self-healing.
Changes in 10.8f:
   1. In Wyse graphics mode, make sure space is space.
   2. Wyse: respond to control codes to set key codes:

```
        ESC z <key> <string> <DEL>
        ESC Z <dir> <key> <string> <DEL>
```
  3. C332: Allow one page to be in 80-column mode, another in 132-column.
  4. WIN: Change original (default) printer font to Courier New, 12 pt.
Changes in 10.8g:
  1. If we redefine a macro to the same value, don't count it as a
     changed key. Thus downloaded special keys that cause no changes
     will not ask you to save them on exit.
  2. Bug fixed in handling of section-sign character (Windows hex
     A7, DOS hex 15)
  3. WIN: Restore functionality of "Connect on Startup" lost in 10.8.
  4. WIN: Restore functionality of "Hostname" lost in 10.8
  5. WIN: If Hostname fails, don't quit; remain in NOT CONNECTED state
  6. WIN: Disable Hostname menu item if communication is serial
  7. WIN: If program fails to connect to host, user can retry by
     doing Communicate:Setup, then hitting OK.
  8. Auto-LF affects incoming linefeeds also now.
Changes in 10.8h:
  1. Behave better if PicLan fails on startup.
  2. Clean up use of colors for some messages on the status line.
  3. WIN95: Bug fixed in background bitmap
  4. If host name is specified in command line, and "Connect on startup"
     is checked, and we fail to connect, quit.
  5. Bug fixed in macro output sequencing: pending F6 command would hang
     when a) processing a WAITFOR or b) waiting for ITX unlock (bell)
  6. On receipt of DC2 (hex 12), if no output file is open, or in Lite,
     treat it as passthrough print. Works better especially with Wyse.
  7. For PicLan, allow specification of host port number, as
         hostname:port[:port2[...]]
     Will try ports in order specified.
     Default, as before, is first available.
Changes in 10.8j:
  1. WIN95: Allow selection of font "script", so that Greek, Cyrillic,
     etc. are possible.
  2. WIN: If the screen font's character set is Symbol, treat it like
     OEM (for MS Linedraw)
  3. WIN: If the screen font's character set is Cyrillic, Greek, etc.,
     don't translate incoming characters.
  4. WIN: Screen Font Chooser dialog now lets user set point size
     (effective when window is not zoomed).
  5. VT220 codes:
        ESC [<param> q   Ignored (used in some Kermit emulations)
        ESC [<params> r   Set scrollable region: fixed to deal with receipt
                            of top of region only.
        ESC * <something>   Ignored: Set G2 character set
        ESC + <something>   Ignored: Set G3 character set
        Bug fixed in dealing with 8-bit codes, such as hex 9B
Changes in 10.8k:
  1. WIN: Fix memory leaks
Changes in 10.8m:
  1. VT220: bug fixed in handling code RI (reverse index) when cursor is
     above the scrollable region.
Changes in 10.8n:
  1. When instructed to draw linedraw characters, and screen font is in a
     different character set (e.g., Cyrillic), translate it to '+', '-', '|'.
  2. WIN: deal better with VT220 in Latin graphics mode.
  3. WIN: Bug fixed: sometimes didn't immediately notice change of screen's

character set.
   4. Wyse60: enable proper behavior for ctrl-F1, ctrl-shift-F1, etc. These keys
      send out codes that are undocumented in Wyse manuals.
   5. Keytrokes in macros will NOT be translated such as OEM to ISO.
   6. In wyse60.kys, define shift-home, shift-end, shift-delete.
   7. WIN: Bug fixed in printing OEM screen dumps.
Changes in 10.8p:
   1. PicLan: Update Window title after connect.
   2. Bug fixed in Wyse 50 (not 60) attributes.
Changes in 10.8q:
   1. PicLan: on new connection, deallocate old memory.
   2. WIN: Reduce screen flashing in field-mode emulations (Wyse 50
      and C332) when data overwrites field delimiter.
   3. WIN: If menu item File:Quit has been removed (with resource editor),
      attempting to quit with Window Close command (or button) will result in
      a box stating "Function disabled". Thus an administrator can restrict
      quitting the program by:
         1. Using a resource editor to:
               a) remove File:Quit menu item
               b) remove alt-X and alt-x accelerators
         2. Attaching a do-nothing macro to the alt-X combination:
               define <alt-X> {}
   4. WIN: Allow separate definition of the following keys on the numeric pad,
      when NumLock is ON: / * - + Enter
      Note that program already provided separate mappings for when NumLock was
      OFF.
Changes in 10.8r:
   1. Discontinue processing host commands coded as
         <DC1><command><DC3>
      Continue processing those coded as
         <hex-1C><command><hex-1D>
   2. WYSE: Treat correctly special characters generated by ESC <ctrl-code>
   3. WYSE: If host sequence "undefines" a key, and it results in no net
      change, don't mark keys as changed.
   4. Bug fixed: INTERPRET didn't show DELETE characters (hex 7F)
Changes in 10.9:
* 1. WIN: Added support for a SOCKS firewall. This is implemented by doing
      Communicate:Network:SOCKS host, and entering the name (or IP) and
      optionally the port number of the SOCKS host.
* 2. LITE: Add ability to turn "Low-level Print" on and off.
* 3. WIN (not Lite): New logic in WPRN driver, called "Print Wizard", will
      automatically deal with various print-file formats during passthrough
      print and PRINTFILE command:
         * If print stream starts with "%!", it is assumed to be a
           Postscript file, and is sent to printer as low-level print.
         * If it contains any Escape characters, it is assumed to be
           printer-specific, and is sent as low-level.
         Otherwise:
         * Several hundred lines are buffered, and then analyzed to determine
           page length (in lines) and width (in columns). The wizard then
           attempts to print the text appropriately, by setting font size,
           line spacing, and margins to "reasonable" values (10 - 20
           characters per inch, 6 - 12 lines per inch, margins up to one
           half inch).
         * Print Wizard will attempt to interpret and process tabs,
           backspace-bolding and backspace-underlining.
         * Print Wizard will avoid printing extra blank page(s) at the

beginning of the print stream.
* Print Wizard DOES obey your choice of page size, orientation, and printer font. In most cases, it would be logical to choose a fixed-space TrueType font, such as Courier New or MS Linedraw.
* Print Wizard will OVERRIDE your choice of Low-level Print and printer font size.
* The end result is that the Print Wizard should be able to automatically handle a) PostScript (assuming you have a PostScript printer, b) printer-specific data, c) plain text data without formfeeds, d) plain text data with a variety of page lengths, and e) plain text data with a variety of widths, such as 80 and 132.
4. In various unregistered/demo versions, terminate after one hour.
5. WIN: Make sure correct menu items are disabled when appropriate.
6. Replace references to NEWLINE with ENTER.
7. WIN: minimize window-size jumps when switching sessions (pages) in C332, Wyse, N7900.
8. Kermit bugs fixed:
    8.1: Didn't cleanly do 8-bit data if not encoded.
    8.2: 8-bit encoding was based on data_bits, even if not serial
9. Wyse: Treat downloaded key definitions differently from those in keymap files. Downloaded definitions will a) not be saved to file, b) not cause Anzio to ask to save keys, c) take precedence, but only until Anzio quits. In KEYS display, both definitions will show; top one will be effective.
10. WIN: Bug fixed in DIR command: wasn't drawing boxes right if non-OEM screen font.
11. WIN: Change "Reverse" color set for better readability.
12. Wyse: Ignore
    ESC c ? <bank>   Clear font bank
    ESC c A ... ^Y   Define soft character