napsaterm

COLLABORATORS

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Contents

Chapter 1

napsaterm

1.1   napsaterm.guide

```
            NapsaTerm 3
***********

   NapsaTerm is a VT100 terminal emulator and rlogin client for
AmiTCP/IP.

   This is edition 1.3.1 of the NapsaTerm documentation,
13 May 1994, for Napsaterm version 3.8.
```

1.2 napsaterm.guide/About

               About Authors
=============

   NapsaTerm is © copyright 1991, 1993, 1994 Pekka Pessi and AmiTCP/IP
Group. Our e-mail address is '<AmiTCP-Group@hut.fi>'. You can reach us
by mail with address
     AmiTCP/IP Group
     c/o Pekka Pessi
     Jämeräntaival 11E122
     FI-02150 Espoo
     Finland, Europe

   Members of the AmiTCP/IP Group and their e-mail addresses are
     Tomi Ollila, '<Tomi.Ollila@cs.hut.fi>'
     Pekka Pessi, '<Pekka.Pessi@hut.fi>'
     Markus Peuhkuri, '<Markus.Peuhkuri@hut.fi>'
     Jarno Rajahalme, '<Jarno.Rajahalme@hut.fi>'

   We are interested to continuously develop NapsaTerm and AmiTCP/IP.
If you improve NapsaTerm or fix bugs, please send the changes to us.

   The
               Tektronix emulation
                is written by Robert A. Knop,
'<rknop@cco.caltech.edu>'. He has also written some new features and
bug fixes to VT100 emulation.

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                           Original licence
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1.3 napsaterm.guide/Copying NapsaTerm

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Copying NapsaTerm
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1.4 napsaterm.guide/Niftyterm licence

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Niftyterm Licence
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```

    Authors: Christopher J. Newman and Todd Williamson
Niftyterm source code is available upon request. Send a disk and a
self-addressed mailer to the address below, and I'll send you a copy.

    If you find this program useful, Chris and I would certainly
appreciate a donation to support further development:
    Todd Williamson
    5440 Fifth Avenue Apt. 59
    Pittsburgh, Pa. 15232-2243

1.5   napsaterm.guide/Invoking from Shell

                    Invoking NapsaTerm from Shell
==============================

    You can start NapsaTerm with following command line options and
parameters:

    NAPSATERM [-V] [--vt102] [--vt52] [--h19] [-7] [-l FILE] [--slow]
              [-g GEOMETRY] [--80] [-f FONTNAME] [-p PROGRAMTITLE] [-S SCREEN]
              [--ic] [-v] [--application] [--numeric] [-w]
              [-d DEVICE] [-u UNIT] [-B LINESPEED] [--shared] [--stdio]
              [-N NET] [-s SERVICE] [-r REMOTENAME] [HOST]

    Command line options can be entered in any order and any combination
(except those that override each other). Single character options begin
with single hyphen and can have optional arguments, multicharacter
options begin with double hyphen. The rest of the command line
arguments are interpreted as host names. With
                    Preference file
                     you can
change the default preferences of 'NapsaTerm'.

1.6   napsaterm.guide/Invoking from Workbench

                    Invoking NapsaTerm from Workbench
=================================

    You can start NapsaTerm from Workbench with various tool types to
accommodate your personal preferences.

    If you are using a project icon with NapsaTerm as tool, the
tooltypes of the project icon will override the tool types of the tool
icon.

'LOGFILE=FILENAME'
'WAITTOEND'
    See

```
                    General options
                         .


'DEVICE=NAME'
'UNIT=NUMBER'
'LINESPEED=NUMBER'
'SHARED'
'REMOTENAME=LOGIN NAME'
'REMOTETYPE=TERMINAL TYPE'
'SERVICE=SERVICE TYPE'
     See
                    Device options
                         .


'EMULATION=TERMINAL TYPE'
'NATIONAL=MODE'
'NATION=NATION NAME'
'KEYMAP=[NATION/]MAPNAME'
'KEYBOARD=[NATION/]MAPNAME'
'KEYPAD=[NUMERIC/APPLICATION]'
'MOUSE=EVENTS'
'BACKSPACE2DELETE'
'DELETE2BACKSPACE'
'CURSORBLINK'
'CURSOR=TYPE'
'BELL=TYPE'
'PASS8'
'CTRL8BIT'
'INVERSE'
'ALTISMETA'
     See
                    Emulation options
                         .


'GEOMETRY=SPECIFICATION'
'PUBSCREENNAME=NAME'
'BASEFONT=FONT/SIZE'
'TITLE=STRING'
'SIZEGADGET=TYPE'
'FIXEDCOLUMNS'
     See
                    Display options
                         .


'HOST'
     See
                    Host names
                         .
```

1.7 napsaterm.guide/Options

```
                    Options
=======
```

    The NapsaTerm can be given either command line options or icon tool
types.

                        General options

                        Device options
                                    Using different interfaces.

                        Emulation options
                                Changing the emulation type.

                        Display options
                                    Changing the 'NapsaTerm' window.

                        Host names
                                        Selecting remote host.

                        Preference file
                                    Setting default preferences

1.8   napsaterm.guide/General options

```
General Options
---------------
```

'-V'
    Displays the current version number and copyright notice. There is
    no corresponding tool type.

'-l FILE'
'LOGFILE=FILENAME'
    Logs the terminal output into specified file.

'-w'
'WAITTOEND'
    Wait for a keypress before closing the emulation window after the
    input stream has finished.

'WAITTOEND=NOT'
    Negative form of previous tool type.

1.9   napsaterm.guide/Device options

```
            Device Options
-------------
```

```
'-d DEVICE'
'DEVICE=NAME'
     Uses specified device. The DEVICE may be any device compatible
     with serial.device (normal Exec device name) or one of the
     following:

         * NET - use the remote login protocol over TCP/IP (default).

         * TELNET - use the Telnet protocol over TCP/IP.

         * DNET - use a "DNet" channel.

'-u UNIT'
'UNIT=NUMBER'
     causes NapsaTerm to use the specified unit of the device. It has no
     effect when using TCP/IP or DNet.

     There is no corresponding tool type.

'-N NETWORK'
     Uses the specified DNet NETWORK. This option is not currently
     implemented.

'-B LINESPEED'
'LINESPEED=NUMBER'
     Starts the NapsaTerm with specified LINE SPEED (as bits per
     second). This parameter is used with 'serial.device' and

                 rlogin protocol
                 .

'--shared'
'SHARED'
     If this option is specified, NapsaTerm will open the device
     specified in "shared" mode. This allows NapsaTerm to share the
     serial port with other applications which also can open the serial
     port in shared mode (including another 'NapsaTerm'). You can also
     prevent NapsaTerm from reading characters from serial device, See

                 Unlisten menu command
                 .

'--stdio'
     Causes NapsaTerm to display whatever comes from standard input, and
     send all keystrokes to standard output. For example:
         NapsaTerm --stdio < filein > fileout
     would display file in a NapsaTerm window.

     There is no corresponding tool type.

'REMOTENAME=LOGIN NAME'
     This tool type is used to specify user name in the remote system
     when using the
                 rlogin protocol
                 .

'REMOTETYPE=TERMINAL TYPE'
```

This tool type specifies the terminal type used in the remote
system when using the
              rlogin protocol
                .

`REMOTETYPE=TERMINAL TYPE'
    Napsaterm connects to the service or server port which is
    specified by this tool type or option when using
              Telnet protocol
                .

1.10   napsaterm.guide/Emulation options

                Emulation Options

`EMULATION=TERMINAL TYPE'
    Select the emulation type to use. The emulation type can be chosen
    with following options from the command line.

`--vt102'
    Emulate a "vt102" terminal.

`--vt52'
    Emulate a "vt52" terminal.

`--h19'
    Emulates a "ht19" terminal.

`NATIONAL=MODE'
    Determines the national mode used. National modes are (valid
    abbreviation for each mode in parenthesis):
    * `None' (`No')
    * `Multinational' (`Mu')
    * `National' (`Na')
     See
              National modes
                .

`NATION=NATION NAME'
    Specifies the used nation. Valid nations are as follows (valid
    abbrevations for each nation in parenthesis):
    * `US ASCII', (`US')
    * `Danish', (`Da')
    * `Finnish', (`Fi')
    * `French', (`Fr')
    * `German', (`Ge')
    * `Norwegian', (`No')
    * `Swedish', (`Sw')
    * `UK ASCII', (`UK')
     Default nation is `US'.

`KEYMAP=[NATION/]MAPNAME'

'KEYBOARD=[NATION/]MAPNAME'
     These tool types are synonymous. They specify the keymap the
     NapsaTerm will use. It is possible to change also a specific
     national keymap, for instance the tool type 'KEYMAP=Finnish/sf7'
     will change the Finnish national keymap to 'sf7'. For default
     national keymaps, See
               Keymaps
               .

'KEYPAD=[NUMERIC/APPLICATION]'
'--numeric'
'--application'
     These options and tool type control the behauvior of keypad. If
     the option '--numeric' is specified or the tool type 'KEYPAD' has
     value 'NUMERIC', the keypad is in normal mode. If the option
     '--application' is specified or the tool type 'KEYPAD' has value
     'APPLICATION', the keypad is in the application mode.

     In application mode, the vt100 control sequences will be sent to
     remote host instead of normal characters. This is handy for text
     editors and the like that use the keypad as a function keypad.

'--slow'
     Starts in slow mode. This mode is useful only watching some vt102
     animations with '--stdio' option.

     There is no corresponding tool type.

'MOUSE=EVENTS'
     This tool type controls which kind of mouse events are sent to the
     remote end.
     OFF
          Don't send mouse clicks

     DOWN
          Send an event only when user presses the select button

     UP
          Send a mouse event only when user releases the select button

     BOTH
          Send both up- and downward clicks

     When mouse events are enabled NapsaTerm sends the following
     sequence when the user presses the left (selection) button on the
     Amiga mouse:
          ESC 'M' QUALS COLUMN LINE
     where column and line are bytes that represent the x, y
     coordinates of the mouse click (offset by 32; a click on (0, 0)
     results in sending two space characters), and quals is like so:

     bit 0
          Control key

     bit 1
          Shift key

```
    bit 2
         Meta (alt) key

    bit 3
         Caps lock

    bit 4
         Mouse down event

    bit 5
         Mouse up event

    bit 6
         Always on (making qual a printable value)

     For example, clicking on column 1, row 1 results in the escape
     sequence
         ESC 'M' 'P' SPC SPC
```

'BACKSPACE2DELETE'
    This switch tool type causes the backspace key mapped to 'DEL'.

'BACKSPACE2DELETE=NOT'
    Negative form of previous tool type.

'DELETE2BACKSPACE'
    This switch tool type causes the Delete key mapped to Backspace.

'DELETE2BACKSPACE=NOT'
    Negative form of previous tool type.

'CURSORBLINK'
    By default, NapsaTerm has a solid cursor. Setting this tool type
    will cause cursor to blink at the rate of once per second.

'CURSORBLINK=NOT'
    Negative form of previous tool type.

'CURSOR=TYPE'
    Available cursor types are 'Invisible', 'Underlined' and 'Block'.

'--ic'
    This option causes NapsaTerm to start up with an invisible cursor.

'BELL=TYPE'
    Available bell types are 'Visual', 'Audio', 'Both', 'None' and
    'Display'. The visual bell flashes the NapsaTerm window, audio
    bell plays a simple beep with 'audio.device'. Both of them can be
    used at the same time. The display bell uses Intuition function
    'DisplayBeep()'.

'PASS8'
    Prevents NapsaTerm from stripping off the 8th bit of the input
    stream character. This is the default mode.

'-7'
'PASS8=NOT'

Causes NapsaTerm to strip off the 8th bit of the incoming
characters. This is useful, if the input may contain 7 bit
characters with parity enabled.

'CTRL8BIT'
Prevents NapsaTerm from converting the 8-bit control codes to
escape sequences. Normally, Napsaterm converts any 8-bit control
character (ie. ASCII codes from 128 to 159) to a two character
escape sequence. The escape sequences consist of a ESC code and
original control character code minus 64. For example, CSI (ASCII
code 155) will be converted to escape sequence ESC [, the ASCII code of [is ←
    91, 155 –
64.

'CTRL8BIT=NOT'
Causes NapsaTerm to convert the 8bit control codes to escape
sequences.

'-v'
'INVERSE'
Starts up with an inverted window. This may be controlled by
terminal codes when emulating a VT102 terminal. See also

            Setup menu
            .

'INVERSE=NOT'
Negative form of previous tool type.

'ALTISMETA'
If this tool type is given, the left alt key on the keyboard will
act as a meta key. If the left alt key is pressed down, all single
character key sequences will be prefixed by ESC character. This is
particularly useful for emacs.

'ALTISMETA=NOT'
Negative form of previous tool type.

1.11 napsaterm.guide/Display options

                Display Options

   These preferences or tool types affect the NapsaTerm window, its
size, placement and title.

'-g GEOMETRY'
'GEOMETRY=SPECIFICATION'
Sets up the window geometry. The format for geometry is
/LEFT/TOP/WIDTH/HEIGHT. A value of -1 for the WIDTH or HEIGHT
makes the window stretch to the right edge or bottom of the
screen. A value of -1 for the TOP makes the window's top edge
appear just below the screen title bar. The LEFT and TOP are

    specified in pixels. The WIDTH and HEIGHT are specified in
    characters.

'-S SCREEN'
'PUBSCREENNAME=NAME'
    Opens the NapsaTerm window on the specified "public screen". If the
    screen don't exist, open the window on the default public screen
    (which is normally the Workbench Screen).

'-f FONTNAME'
'BASEFONT=FONT/SIZE'
    Sets the font for the NapsaTerm window. By default the font 'napsa
    11' or, if 'napsa 11' cannot be found, 'topaz 8' is used. If you
    wish to use a different font such as "courier 11", simply specify
    FONT as 'courier/11'. If the font you choose is not fixed width,
    strange and unusual things will happen. For more information of
    NapsaTerm fonts see
                Fonts
                   .

'-p PROGRAMTITLE'
'TITLE=STRING'
    Draws the PROGRAM TITLE with given text. The actual window title is
    concatenated with display size indicator '(width $\times$ height)'.
    Normal title is the remote host name when using rlogin, otherwise
    'NapsaTerm'.

'SIZEGADGET=TYPE'
    This tool type controls which border of the window the window's
    sizing gadget will appear in. If you have a sizing gadget on a
    window, you must lose some of the window space for the border to
    contain it. This preference controls whether you lose rows,
    columns, or nothing. If you choose NONE, the window will not have
    a size gadget, and will therefore not be resizeable. It is useful
    if you want an 80x24 window to take up the smallest possible
    screen space. If you choose COLUMN, the sizing gadget will be on
    the right border, and if ROW, the sizing gadget will be on the
    bottom border.

'--80'
'FIXEDCOLUMNS'
    If this option or tool type is given NapsaTerm won't use no more
    than 80 columns of text. This is useful for running programs
    written for terminals that assume the terminal has 80 columns.

'FIXEDCOLUMNS=NOT'
    Negative form of previous tool type.

1.12 napsaterm.guide/Host names

Host Names

```
'HOST=NAME[|NAME2...]'
    The tool type HOST is used to specify remote host name(s). The host
names should be given in standard internet format.

    When NapsaTerm is started from command line, command line arguments
which do not start with hyphen are regarded as host names. If you need
to use host name which begins with hyphen '-', give a single hyphen as
an argument after all options and before the host name.
      NapsaTerm -d net - -weird.host.name.in.net

    If NapsaTerm is given multiple host names, it will randomly connect
to one of them.

    The following command causes NapsaTerm connect to either 'punkku' or
'vinkku':
      run NapsaTerm -g 0/-1/80/30 punkku vinkku
```

1.13 napsaterm.guide/Preference file

```
                 Preference File
---------------

    The preference file 'AmiTCP:db/NapsaPrefs' contains default
preferences when you invoke 'NapsaTerm' from CLI.

    The preference file contains tool-type-like options given in a
X-resource-look-a-like format. The preference file format is compatible
with 'NiftyTerm' and older 'NapsaTerm' versions. Each row in the
preference file has format as follows:
[COMMAND NAME'.']PREFERENCE NAME':' VALUE

    "Preference name" is the part of the line before the ':' character,
"preference value" is the part after it.

    Unless otherwise specified, preference name and value are
case-insensitive. Unregocnized preference names are ignored,
unrecognized values revert to default.

    If the corresponding tool type is a *switch*, the preference value
should be '1', 'true' or 'yes', or the preference is silently ignored.

    Tool type 'Host' has no corresponding preference.

    See
               Alternative command names
               , if you need many different default
preference sets.

    For compatibility reasons, if the file 'AmiTCP:db/NapsaPrefs' does
not exist, also the files 'S:NapsaPrefs' and 'S:NiftyPrefs' are
searched for preferences.
```

1.14   napsaterm.guide/Alternative command names

Using Alternative Command Names
....

   If the preference name is prefixed with COMMAND NAME, it is valid
only when `NapsaTerm' is invoked with that name. You can invoke
`NapsaTerm' with a different name, if you rename the `NapsaTerm'
program file or make a new link to it. For example, you could make
following links
     makelink AmiTCP:bin/NapsaTermUS AmiTCP:bin/NapsaTerm
     makelink AmiTCP:bin/NapsaTermUK AmiTCP:bin/NapsaTerm
   and you have added following preferences
     Nation: Finnish
     NapsaTerm.Nation: US
     NapsaTermUK.Nation: UK
   If you started `NapsaTerm' with the command `NapsaTerm', you could
use Finnish keyboard (`s') and character set (ISO 646 SF-2). If you
gave command `NapsaTermUK', you would get the British keyboard (`uk')
and character set (UK-ASCII).

1.15   napsaterm.guide/Menus

                    Using Menus
===========

   NapsaTerm have three menus, `Command', `Edit' and `Setup'. The
`Command' menu contains terminal control commands.  The `Edit' menu
handles the clipboard. The `Setup' menu allows the user to adjust the
way `NapsaTerm' functions.

                   Command menu

                   Edit menu

                   Setup menu

1.16   napsaterm.guide/Command menu

Command Menu

   The `Command' menu contains terminal control commands.

`Clear Screen `Amiga-S''
     Moves the current NapsaTerm prompt to the top of the NapsaTerm
     window and clears the screen.

```
'To Tek4010    'Amiga-G''
     Selects the Tek4010 emulation and activates the Tek4010 window.

'To VT102      'Amiga-T''
     Selects the VT102 emulation and activates the VT102 window.

'Soft Reset    'Amiga-R''
     Resets all terminal styles, scroll regions, and invert mode.

'Flush         'Amiga-F''
     Flushes the buffers for the current device.  Useful if you did
     something that will cause a lot of output, and you want to tell
     NapsaTerm not to display it all.

'Break         'Amiga-B''
     Sends a break signal to the current device.

     'Break' is enabled only when NapsaTerm is connected to a serial
     device.

'Unlisten      'Amiga-U''
     NapsaTerm will cease to talk to whatever device it is connected
     to, so that another program can use it exclusively.  Note that all
     keyboard input is flushed as well until you select 'Listen' menu
     option.

     'Unlisten' is enabled only when NapsaTerm is started in 'Shared'
     mode.

'Listen        'Amiga-L''
     NapsaTerm restarts talking and listening to device it is connected
     to.

     'Listen' is enabled after 'Unlisten' is selected.

     An example of usage for 'UnListen' and 'Listen': you're logged in
     and you want to save something to a log file.  You had foresight
     and started NapsaTerm in shared mode.  You select 'Unlisten' and
     start another NapsaTerm writing to a log file.  When you have
     everything in the log file, you quit the second NapsaTerm and
     select 'listen' the original.  This option might be useful if
     someone wants to write some stand-alone file transfer utilities.

'Quit          'Amiga-Q''
     Exits NapsaTerm and closes the window.
```

1.17 napsaterm.guide/Edit menu

```
Edit Menu
---------

   The 'Edit' menu handles the clipboard.

'Copy          'Amiga-C''
```

     Copies the selected text into the clipboard. You can put the text
     you copied most recently back into any document by choosing
     'Paste'.

'Paste   'Amiga-P''
     Copies the most recently copied text to the current cursor
     position.

'Move   'Amiga-M''
     If a previous command or some text is selected in the NapsaTerm
     window, 'Move' inserts the text as if it had been typed.

'Execute   'Amiga-E''
     The same as 'Move', only it follows the text with a 'LF' character.

1.18   napsaterm.guide/Setup menu

                    Setup Menu

   The 'Setup' menu allows the user to adjust the way 'NapsaTerm'
functions.

'National Mode'
     See
                    Tool type 'NATIONAL'
                    .

'Nation'
     See
                    Tool type 'NATION'
                    .

'Terminal Type'
     See
                    Tool type 'EMULATION'
                    .

'Backspace is sent as'
     See
                    Tool type 'BACKSPACE2DELETE'
                    .

'Del is sent as'
     See
                    Tool type 'DELETE2BACKSPACE'
                    .

'Left Alt key is'
     See
                    Tool type 'ALTISMETA'
                    .

'Keypad'

        See
                        Tool type 'KEYPAD'
                        .

'Mouse Events'
        See
                        Tool type 'MOUSE'
                        .

'Control Codes'
        See
                        Tool type 'CTRL8BIT'
                        .

'Cursor'
        See
                        Tool type 'CURSOR'
                        .

'Display Width'
        See
                        Tool type 'FIXEDCOLUMNS'
                        .

'Display Speed'
        See
                        Option '--slow'
                        .

'Bell Type'
        See
                        Tool type 'BELL'
                        .

'Reverse'
        See
                        Tool type 'INVERSE'
                        .

'Ansi_LNM'
        Controls whether RETURN should be sent as CR-LF sequence.

1.19 napsaterm.guide/Fonts

How NapsaTerm Uses Fonts
========================

   NapsaTerm should be able to use any fixed-width font. However,
standard Amiga fonts do not represent the VT100's character set very
well. Included with this NapsaTerm is a set of fonts with names
starting with 'Napsa'. Some explanation of these fonts is in order.

   NapsaTerm starts out with a base font name, something like 'topaz'

or 'Napsa'. If NapsaTerm needs an italic or bold font, it first looks
in the fonts: directory to see if there is a version of the current
font which was designed to be italic or bold. If not, it uses the
Amiga's internal functions to construct one. When it needs one of the
special VT100 character sets, it appends an extension to the font name
and looks for a font of the same size as the current font with the new
name. The extensions are as follows:

'v'

    alternate character set

'w'

    double-width font

't'

    top half of double-width double-height font

'b'

    bottom half of double-width double-height font

    'vw', 'vt', and 'vb' are also extensions, meaning the alternate
character set version of the different-sized font. So, for example, if
NapsaTerm was using the font 'Napsa/11', and it needed a double-width
font, it would look for the font 'Napsaw/11'.

    The fonts that come with the distribution are designed to be used on
screens where the pixels are roughly as wide as they are tall. Any of
the 640$\times$400 graphics modes fall into this category. In the 640$\times$200
modes, the fonts will seem too tall.

    If anyone creates any fonts for use with NapsaTerm or Niftyterm, I'd
like to get a copy of them.

1.20 napsaterm.guide/National

                National Modes
==============

    The national mode is set with tool type 'NATIONAL' There are three
different national modes in NapsaTerm.

None
    By default, when no national mode in not in use, ('None',
    abbreviated as 'NO'), NapsaTerm uses the ISO-8857 Latin 1 character
    set, the standard character set used in Amiga. By default,
    NapsaTerm uses either the default system keymap or the keymap
    specified with tool type 'KEYMAP', if any.

Multinational
    In the 'Multinational' mode (abbreviated as 'MU') NapsaTerm uses
    the Latin 1 character set and the appropriate national keymap. See

                Keymaps
                  for a list of default national keymap names. A specific

national keymap can also be specified with tool type 'KEYMAP' or
'KEYBOARD'.

National
     In the 'National' mode (abbreviated as 'NA') NapsaTerm uses the
     appropriate national 7 bit character set and the national keymap.
     See
                    Character tables
                     for tables of national character sets.

                  Keymaps
                                    Default national keymaps

                  Character tables
                            National character tables

1.21 napsaterm.guide/Keymaps

                  National Keymaps

   Default national keymaps are as follows:
* 'US ASCII' uses ('usa1')
* 'Danish', ('dk')
* 'Finnish', ('s')
* 'French', ('f')
* 'German', ('d')
* 'Norwegian', ('n')
* 'Swedish', ('s')
* 'UK ASCII', ('gb')
   You can change national keymap with tool type
'KEYMAP'=NATION/KEYMAPNAME, for example
     KEYMAP=Finnish/s-term
   changes the Finnish keymap to 's-term'. You can abbreviate the
nation name, See
              tool type NATION
                .

1.22 napsaterm.guide/Character tables

National Character Tables

   NapsaTerm uses ISO 646 national character codes as follows:

     DEC   35 36 64 91 92 93 94 96 123 124 125 126

```
===========================================================
US-ASCII   #    $    @    [    \    ]    ^    `    {    |    }    ~

Danish     #    $    @    Æ    Ø    Å    ^    `    æ    ø    å    ~

Finnish    #    $    @    Ä    Ö    Å    ^    `    ä    ö    å    ~

French     #    $    à    \textdegree{}    ç    §    ^    `    é    ù    è    ¨

German     #    $    §    Ä    Ö    Ü    ^    `    ä    ö    ü    ß

Norwegian  #    ¤    É    Æ    Ø    Å    Ü    é    æ    ø    å    ü

Swedish    #    ¤    É    Ä    Ö    Å    Ü    é    ä    ö    å    ü

UK-ASCII   £    $    @    [    \    ]    ^    `    {    |    }    ~
===========================================================
HEX        23   24   40   5B   5C   5D   5E   60   7B   7C   7D   7E
```

1.23 napsaterm.guide/IO modes

```
              Using Different IO Modes
========================
```

   NapsaTerm provides four different ways to do the terminal IO.

                  rlogin protocol

               Telnet protocol

               Serial device

               DNet

               DOS IO

1.24 napsaterm.guide/rlogin protocol

```
              Rlogin protocol
---------------
```

   The rlogin protocol is described in the 'RFC 1282'. It is a
Unix-specific remote terminal session protocol, somewhat like

              Telnet protocol
               but with different features. The remote rlogin session
get your the user name, terminal type and line speed from the rlogin
client.

Rlogin protocol uses your local hostname (domain name of the computer you are logging from), your local user name and user name at the "rlogin server" for authentication. If there is a matching entry in the 'rhosts' files, the rlogin server let you log in without asking the password. If no match is found, rlogin server asks you for the password for the remote user. If it is not correct, it reverts to normal login procedure.

NapsaTerm is used as a rlogin client for AmiTCP/IP. Currently NapsaTerm gets the local user name from environment variable 'USER'. The remote user name is same as your local user name unless you specify tool type 'RemoteName'.

For example, your local user name is 'ppessi', but remote user name is 't35082k'. If not told otherwise, NapsaTerm will introduce your as 'ppessi' to the remote machine. As the rlogin server regards it as the password of account of 'ppessi', you can not give your password at the first 'Password:' prompt. You should use tool type 'RemoteName':
    RemoteName=t35082k
Now you can enter password for 't35082k''s account without typing the user name each time.

You should add an entry to your '.rhosts' file in a Unix machine only if your Amiga is trustworthy -- that is, nobody else but you can use it and it is in secure network. A '.rhosts' entry consists of a host name and a user name in that host. The host name is the canonic host name of machine you are logging from. For example, if you have account 't35082k' in machine called 'kaira.hut.fi', you could add following line to your '.rhosts' file:
    kaira.hut.fi t35082k

The line speed has additional meaning when using rlogin protocol. Some Unix programs and terminal drivers use the nominal terminal speed to determine the throughput of your connection. There may be a problem if the speed is 300 b/s (or even 9600 b/s) while you are using Ethernet. Likewise the nominal speed of 38400 b/s over a 2400 b/s slip connection is likely to cause trouble. You can determine your nominal speed in the Unix systems with the 'stty' command.

1.25   napsaterm.guide/Telnet protocol

                Serial devices

   The Telnet protocol is described in various RFC documents. It is a generic remote session protocol with rich features and more general use than
                rlogin protocol
                .

   Currently the Napsaterm supports terminal type and size negotation. It does not pass your user name to telnet server.

1.26   napsaterm.guide/Serial device

```
              Serial devices
--------------

   NapsaTerm can use any 'serial.device'-compatible Exec device. You
can specify the device name and unit number with tool types or command
line options. See
              Device options
              .

   You can start NapsaTerm in shared mode, See
              '--shared'
              . In "shared
mode" other programs (like another NapsaTerm) can open serial device in
the same time. The actual input data is is not shared, but all programs
will read the data from device in their turn. NapsaTerm can stop
reading data from serial device, see See
              Unlisten
              .
```

1.27   napsaterm.guide/DNet

```
DNet
----

   "DNet" is a serial line multiplexing protocol with priorities and
provisions for server/client architecture. It works between Amigas and
Unix machines running 4BSD or SunOS. There are ports for different 4BSD
variants and Linux. There exists many network-type applications for
DNet.

   If you are using "DNet", you can use NapsaTerm instead of 'FTerm'.
```

1.28   napsaterm.guide/DOS IO

```
DOS IO
------

   The input and output of NapsaTerm can be read from and written to
"standard input" and "standard output" DOS IO streams. For example, if
you want to view a VT100 animation with NapsaTerm, you can give command
    NapsaTerm --slow --stdio < vt100-animation-file
```

1.29   napsaterm.guide/Tektronix emulation

```
Tektronix emulation
===================
```

   There are two versions of Napsaterm binaries in distribution archive,
one with Tektronix emulation and one without. The tektronix emulation
is implemented in separate window, the VT100 window works as usually.

   Two menu items have been added to Tektronix emulation version. They
are 'To VT102' and 'To Tek4010'. When a emulation window (tek or vt)
is selected, it may be brought to the front and activated (depending on
settings of the config menus on the Tek4010 window). However, if you
click in a window, or bring it to the front, it does not necessarily
make it the one receiving data from the host. The 'To Tek4010' and 'To
VT102' menu items in each screen switch that, as can certain escape
sequences from the host.

1.30   napsaterm.guide/History

```
                  NapsaTerm History
==================
```

   NapsaTerm is derived originally from Niftyterm 1.2. It is called
NapsaTerm because original authors wanted to keep distinction clear
between it and their versions of Niftyterm. See
                  Niftyterm licence
                        .

   There are some features in NapsaTerm 3 which are incompatible with
earlier versions or with NiftyTerm 1.2.

                    Changes in Version 3

                    Changes in Version 2

                    Changes in Version 1

1.31   napsaterm.guide/Changes in Version 3

```
                  Changed in Version 3.8
----------------------
```

   * The tool type 'CTRL8BIT' is no more enabled by default, ie. 7 bit
     control codes are used normally.

   * Bug with audio bell is fixed.

Changed in Version 3.7
----

    * Support for
                 Telnet protocol
                  was added. Supported features include
       terminal type and size negotation.

    * The long options have now double hyphen at the beginning.

    * The 8-bit/7-bit control codes are working for all keys.

    * New menu item added, See
                 Control Codes
                 , which enables sending
       8-bit control codes.

Changed in Versions 3.4 and 3.5

    Robert Knop, '<rknop@cco.caltech.edu>', released these versions. The
major new feature in these releases is the
                 Tektronix emulation
                 . Any
bug reports on the tek4010 emulation should be sent to Rob Knop.

    * The tek4010 emulation has following features:
         - Vector, Alpha, Incremental, and Point-plot modes are (at
           least partially) supported.

         - As of version 3.5, the GIN cursor is supported.

         - Some GraphOn enhancements, e.g. block fill mode, are also
           supported.

         -   * 'ANSI LNM' added to the
                 Setup menu
                 . Sometimes changing the state
       of this flag can improve the operation of the terminal's newlines
       under Unix when running directly over the serial port. It does
       not seem to be necessary when Napsaterm is used with AmiTCP/IP.

    * Support for the VT100 application keypad has been added. Under the

                 Setup menu
                 , if you select 'Application' for keypad type, VT100
       escape sequences will be sent to the host instead of characters
       when you hit keys on the numeric keypad. This is handy for text
       editors and the like that use the keypad as a function keypad.

    * A small number of additional minor enhancements and bugfixes to
       the VT100 emulation.

Changed in Version 3.3
----

    * For compatibility reasons, if the file 'AmiTCP:db/NapsaPrefs' does

          not exist, the files 'S:NapsaPrefs' and 'S:NiftyPrefs' are
          searched for preferences.

    * New menu item 'Left Alt key is' was added to 'Setup' menu.

Changes in Version 3.2 (3beta)
----

    * Workbench support is added. You can start NapsaTerm directly from
      Workbench

    * As a consequence of previous, the preference parsing is altered.
      See
                Preference file
                . Preference files are used only when NapsaTerm
      started from shell. The program name used in preference parsing is
      not fixed, the command name given by shell is used

    * NapsaTerm can select randomly a host if it is given multiple host
      names

    * Mouse support is enchanched. (See
                Mouse
                .) NapsaTerm sends Mouse
      events as 'ESC M' sequences. Preference 'Emacsmode' is obsolete
      and it is supported no more

    * New preference 'Backspace2Delete'. (See
                Backspace2Delete
                .) There
      was an old preference 'NormalBackspace', which had opposite meaning

    * New preference 'Delete2Backspace'. (See
                Delete2Backspace
                .) There
      was an old preference 'NormalDelete', which had opposite meaning

    * Preference 'LineSpeed' is used to change the serial speed, also a
      new option '-B' changes the line speed

    * Preference 'National' has now three values, 'None', 'MultiNatinal'
      and 'National'

1.32   napsaterm.guide/Changes in Version 2

                Changes in Version 2.2
      ----

    * Preference 'PubScreenName'

    * Preference 'ctrl8bit'

    * Preference 'Keyboard' was mentioned version 2 documentation instead

        of correct preference 'Keymap'. Now both preferences can be used

Changes in Version 2.1
----

   * Option '-p' selects the public screen

   * The preference file is moved into the directory 'AmiTCP:db/'

Changes in Version 2.0

   The AmiTCP/IP BSD socket interface was added to NapsaTerm after the
porting of real "rlogin" program seemed to take too much effort and
time. The
                rlogin protocol
                 is a very simple. However asynchronous,
interactive IO with AmigaDOS is quite ineffective and quite complex to
implement. Fortunately Niftyterm IO implementation was extremely
flexible and it was easy to add new IO methods for rlogin.

   * Option '-d net' selects now rlogin protocol ('-d dnet' will select
     DNet).

   * New preferences:
    'Linespeed'
    'RemoteName'
    'RemoteType'

1.33 napsaterm.guide/Changes in Version 1

                NapsaTerm 1.3 Compared to Niftyterm 1.2
----

   * Support for different international keyboards layouts and
     character sets is added. NapsaTerm supports multinational ISO
     8857-Latin-1 character set, the native Amiga character set. It
     also supports some ISO 646 national character sets. For the
     character tables for ISO 646 character sets see
                Character tables
                 .

   * New preferences were added:
    'Keymap'
    'National'
   * Left Alt key can be used as a 'Meta' key by setting the "AltisMeta"
     preference. If you press a key with left Alt key NapsaTerm sends an
     Escape character (ASCII 27) before the key's ASCII code. Niftyterm
     sets the 8th bit of sent ASCII code.

   * Switching 'Delete' and 'Backspace' keys was enchanched. Switching
     'Delete' and 'Backspace' keys are now done before key code
     conversion. So, even if the 'Backspace' key (arrow to left above
     the 'Enter' key) will send a 'DEL' code (ASCII 127) but if you

press Ctrl and H, NapsaTerm sends still '^H' (ASCII 8).

* A bug in the clipboard handling is fixed.

* NapsaTerm do not free the console window when it is started, you
  must start it explicitly with run. Iconify feature is removed (if
  you really want it, do recompile from the sources).

* Iconifying was removed as the zoom feature in Amiga OS 2.04 had
  most of its functionality

1.34 napsaterm.guide/Glossary

```
Glossary
========
```

1.35 napsaterm.guide/Index

```
                Index
=====
```

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```
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```