

HexDump manual

<http://sourceforge.net/projects/hexdump>

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General information

HexDump is developed for developers, who has to deal with binary data, which are unknown in structure. It will map the whole file into memory, so enabling a fast scan of the data. The data are displayed to screen with address, the data itself in hexadecimal numbers, 4 bytes as a word block, and optional as text, where non-printable characters are replaced by a “.”. These three fields are synchronized scrollable. Highlighting in the hexadecimal field will reflect the data together with the selected address in extra fields, one control, showing the original value and one for editing. two blue arrow buttons will increment the address and so the selection. A toggle button at the right side will switch to “**editable**” mode and back. The edit state is marked via color of input field and the toggle button. Switching to **editable** the first time will generate a save-copy of the original file.

On top of the window there is a menu bar, containing file-selection, Maneuver-, search-, print- and other buttons to control the Program.

All dialogs have a green field at the bottom. This will give a short help, explaining the function of each button or field under the mouse-cursor.

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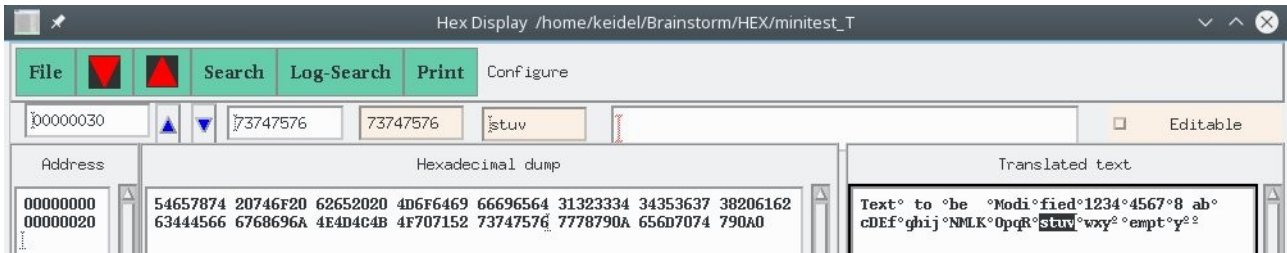
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Handling

The lowest green field will give a short description of the field or button under your cursor.

Within the displayed Text there will be some special characters 1. a °, this is a simple delimiter between two 32 Bit parts. 2. ÷, this is any control character.

Selection of any item in the Hex-Code field or the Text field will be adjusted to get a 32 Bit item and will display this in the corresponding editing field (the are always both fields filled with the corresponding item. The pink color shows, that these fields can't be edited, to edit them use the Editable Button, the field will appear in green when they may be edited. A press on “return” will update the Hex- and the text-field rewriting both fields and the file.



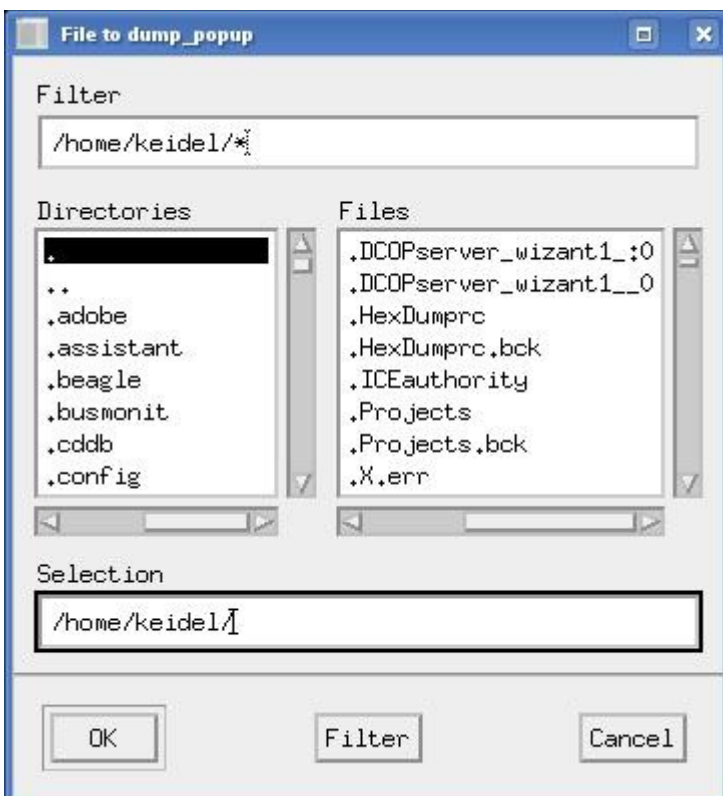
The Menu bar

File button

Pressing the “**File**”-button will start a menu with the items “**Dump File**” and “**QUIT**”. The latter will terminate the program, whereas the first will raise a file-selection dialog to select the file, which shall be dumped.



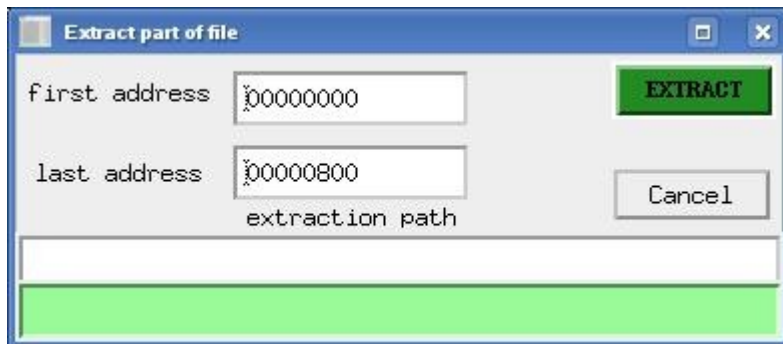
“**Extract part**” will cut out a piece of the file and copies it to a new file. To control this, a special dialog is raised.



Selecting a file and pressing “**OK**” will map in the file and display the first addresses of it (from address 0 to a definable block size).

If the file is bigger than the defined block-size, the two arrow-buttons (red arrows) will enable the navigation through the file in blocks. They will be only sensitive, if there is at least one more block in this direction.

Extract part dialog is asking for an address range to be extracted from the actual file. So first and last address must be input in Hexadecimal. The lower field



“extraction path” need a legal path as input. Actual there is no browsing planned. After everything is input, press **“EXTRACT”** an a binary copy of this part of the mapped file will be output.

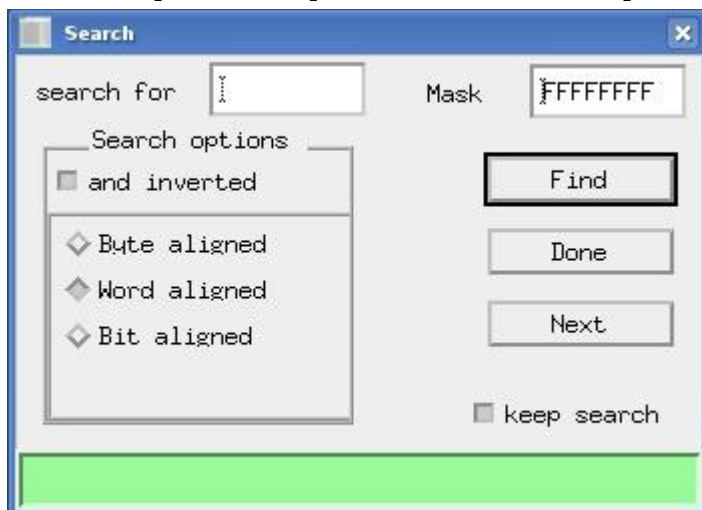
“Search” button



Goto Address will raise a small dialog to select the requested address.



Search Pattern will raise a dialog to input the searched pattern and the mask. The mask will be used to compare for the pattern. So a “1” is, compare for this bit, a “0” means, ignore this bit. The



“inverted” toggle enables checking for the given pattern plus the inverted pattern. This may be used to find “sync”-patterns.

The search may be done in three different ways. First the pattern is searched on a byte aligned method, so after each compare, the address is incremented by just one byte. Second on a word alignment, The increment is 4-bytes. Finally, the search can be done on bit level, i.e. all the data are shifted bit by bit (and compared with) against the pattern and mask. Of course, if a hit is found, the

displayed (and selected) pattern doesn't show the the searched pattern, but the area, where it is. There will be a little field, showing the bit number of Hit.

Find button will start the search from beginning of the file, **Next** continues searching. **Done** will quit this dialog.

The toggle button **“keep search”** will inhibit automatic quitting of the dialog. This may be set by **Configure** as default behavior.

Log-Search

This button raises a dialog to select a file, where all search results will be logged.

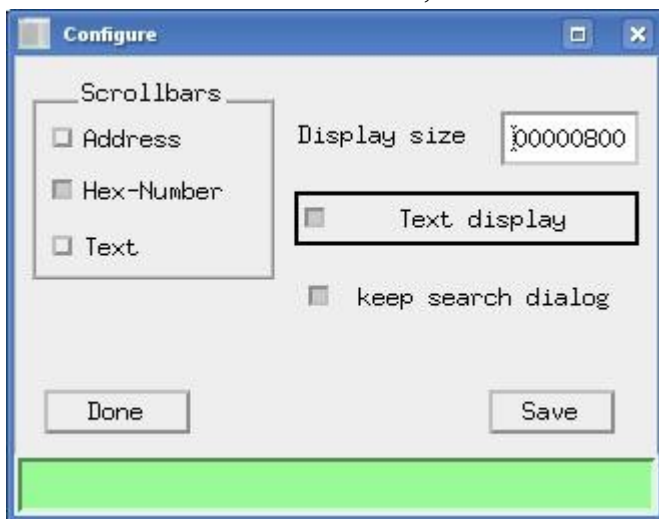
Print button

The **print** button raises a pulldown menu to select if the total file (**All**) shall be dumped to paper or the actual displayed range (**Actual range**) only. In addition it may start a selection dialog (**Printfile**), to activate a printfile instead of the standard printer. The printing is done via a2ps, so a printfile will be written in *PostScript*. The Format of the printout (or file) will be the same as shown on the screen.



Configure

Configure opens a dialog, where several defaults may be selected. The selected values will stay as defaults for the actual session or, if **Saved** for the next sessions. Saving will be done via a hidden file in the home directory “**.HexDumprc**”, which is written as a text-file with keywords.



The *Scrollbars* area:

There may be any or all of the possible scrollbars selected, but at least one must be selected.

The toggle “*Text display*” will enable or disable the display of text, if disabled, the window on screen will be smaller.

The toggle “*keep search display*” will do the same as the corresponding toggle in the search dialog.

The field “*Display size*” will define the range, which can be displayed in the

scrolling areas. Any data outside the block will need navigation via the red arrows or automatically during search or address increment, causing a new block being displayed. The input to this field must be a hex number.

Installation

You will download a compressed tar file from Sourceforge, containing a precompiled binary (compiled for 32-bit computer) and the complete source code together with this documentation.

Uncompressing and unpacking will create a directory containing all files to install **HexDump**.

There are some prerequisites, which should be installed on your system.

To run the binary, **MOTIF** must be installed with a corresponding version. To generate print-outs you need **a2ps** installed. If HexDump shall be compiled from source, you will need **MOTIF-development** installed, i.e. all header-files, the **make** and **imake** system. Of course, gcc is needed. Change into the hexdump directory and edit the file “**Imakefile**”, changing the item:

HEXDUMPBINDIR=/usr/local/bin to your installation path.

Now run “**xmkmf -a**” which will generate a **Makefile** for your system, run **make**. Best now, is testing the generated binary. Finally you may run “**make install**”, may be as root, to install the program into your selected path.

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