

DVI-Driver for *DECwindows*

DVIDECW

Installation Guide
User's Guide

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1 Installation of *DVIDECW*

DVIDECW itself can be installed after the command file `TEXVIEW.COM` is modified to suit the system paths of the local $\text{T}_{\text{E}}\text{X}$ installation. Please perform the following steps to do so:

- in *FileView*, select the `Customize/Verbs and Menus` option
- enter `TeX Preview` below the 'verb names' box as a new name and click on the 'Enter' button to accept it
- enter the required DCL command for the $\text{T}_{\text{E}}\text{X}$ -Preview entry, e.g. `<path>texview.com`, then click on the 'Enter' button
- select 'Applications' from the 'Menu Names' box and click on 'Add' below the 'Verbs in menu' box
- click on the 'Apply' and 'Ok' buttons to install the entry into the menu bar.
- in *FileView*, select the `Customize/File Types` option and install the `.DVI` file type

2 Operation of *DVIDECW*

2.1 Invocation of *DVIDECW*

2.1.1 Starting from *DECTERM*

Enter command name, options and filename as described in [2] within the *DECTERM* window.

2.1.2 Starting from *FileView/DCL Command Window*

Create a *DCL Command Window* by clicking on `Utilities/DCL Command Window` in *FileView*. Enter command name, options and filename as described in [2].

2.1.3 Starting from *FileView* menu bar

If the installation of *DVIDECW* was done properly, *DVIDECW* can be started by choosing the `Applications/TeX Preview` option from the *FileView* menu bar. A dialog box will appear and ask for the filename to be processed, after clicking on the 'OK' button a second dialog box will appear and ask for processing options.

2.1.4 Starting by double-clicking within *FileView* window

If the installation of *DVIDECW* was done properly, *DVIDECW* can be started by double-clicking on any DVI-file (Filename has the extension `.DVI`). A dialog box will appear and ask for processing options.

2.1.5 Remarks

DVIDECW offers the same options as the Beebe *BBN Bitgraph*-driver. However, it ignores the `-o` option (order pages) and will only display the first page (Default: 1) given in the `-o` option. All other options conform to the description of N.F.Beebe's driver family [2].

DVIDECW initially operates with 69 dpi fonts which permit a full page preview in all formats. The option `-m1` (as well as zooming from the menu bar) uses 83 dpi fonts which are quite readable and allow a full page preview in most cases (if offsets are disabled).

During page creation *DVIDECW* writes status reports to the *DECwindows* standard output window. These status reports (and the creation of a standard output window) can be suppressed by entering the `quiet` option (`-q`) in the processing options dialog box. This will switch to quiet mode which only writes error messages to the standard output window.

After invocation *DVIDECW* creates a window with a menu bar (for interactive commands) and two scrollbars. The window title bar contains information about the current page and resolution.

If the 'TeX Preview' is active (it has the *Input Focus*), some of the menu bar options can be operated with keyboard shortcuts which correspond to those defined by Nelson F. Beebe in [2]. To give the *Input Focus* to the 'TeX Preview' window, just click with the mouse somewhere within the window area. All shortcut key combinations are also displayed in the menu bar next to the option names.

2.2 *DVIDECW* menus

2.2.1 File-Menu

- `About DVIDECW...` will display a dialog box which contains information about the program version and copyrights.
- `Quit` closes all *DVIDECW* windows and terminates the application.

2.2.2 Edit-Menu

- `Cut`
- `Copy` copies the window contents to the Clipboard ¹
- `Paste`
- `Clear`
- `Select All`

¹The Copy operation does not work in the current version of *DVIDECW*

The Edit Menu is implemented according to the standards defined in [5], but only the Copy option is currently supported.

2.2.3 Page-Menu

- Previous switches to the previous page
- Next switches to the next page
- Goto... opens a dialog box, where a page number can be entered. After clicking on 'OK' or 'GO', the selected page will be displayed.
- Zoom in magnifies the current page (by one \TeX magstep)
- Zoom out reduces the current page (by one \TeX magstep)
- Top of Page moves window contents to top of page
- Bot of Page moves window contents to bottom of page

2.2.4 Move-Menu

- Up moves window contents up
- Down moves window contents down
- Left moves window contents left
- Right moves window contents right

2.2.5 Options-Menu

- No offset/Use offset deactivates/activates any offset specified in the command-line
- Fast move/Slow move switches between big/small move distances
- Reset position resets window position

2.3 Dialog boxes

DVIDECW provides six dialog boxes:

- AlertNYI pops up, if an unimplemented program operation was selected by the user
- About*DVIDECW* shows information about the *DVIDECW* program version and copyrights

- `LastpageInfo` is displayed, if a page beyond the last page in the DVI file is selected
- `FirstpageInfo` is displayed, if a page beyond the first page in the DVI file is selected
- `ZoomrangeInfo` pops up, if the zoom range is exceeded
- `Gotopage_box` provides the possibility to enter a page number, which is to be displayed next. This dialog box is of the *'modeless'* type and remains on the screen if the *'Go'* button is clicked. If the *'Cancel'* or *'Ok'* buttons are clicked, this dialog box will disappear. The *'Enter'* key can be used instead of clicking the *'Ok'* button.

References

- [1] Knuth, Donald E. *The T_EXbook*, Addison-Wesley, Menlo Park (California) 1989
- [2] Beebe, Nelson H.F. *DVIxxx - Display T_EX DVI Files on Assorted Output Devices*, University of Utah, Salt Lake City (Utah)
- [3] Beebe, Nelson H.F. *A T_EXDVI Driver Family*, University of Utah, Salt Lake City (Utah) 15.April 1987, Rev. 2.07
- [4] *Overview of VMS DECwindows*, Digital Equipment Corporation, Maynard (Massachusetts) 1988
- [5] *XUI Style Guide*, Digital Equipment Corporation, Maynard (Massachusetts) 1989

A DCL-Command files

A.1 DVIDECW.COM

Command file to compile/link *DVIDECW*

```
$ !-----!
$ ! Filename: DVIDECW.COM !
$ ! Function: Compiles and links the DVIDECW DEC-Windows application !
$ ! (c) 19-06-90 by Ch. Markus !
$ !-----!
$ !
$ !
$ if f$trnlm("decw$include") .nes. "" then goto startupok
$ write sys$output "Invoke @DECW$STARTUP before using this procedure"
$ !
$startupok:
$ !
$ ! Defines which have to be adapted to system installation before
$ ! attempting to compile (will need modifications)
$ !
$ define/nolog dvi$decw $disk1:[1050101.includes] !modified .H files
$ define/nolog dvi$beebe $disk2:[dvi-beebe.dvi] !standard .H files
$ !from BEEBE package
$ !
$ ! Defines which rely on system symbols set previously (partly
$ ! defined in DECW$STARTUP)
$ !
$ define/nolog c$include dvi$decw,dvi$beebe,decw$include,sys$library
$ define/nolog vaxc$include c$include
$ define/nolog X11 decw$include
$ define/nolog sys sys$library
$ define/nolog uil$include decw$include
$ !
$ ! General checkup of old errors
$ !
$ on warning then goto error
$ !
$ !
$ ! Compile the 'C'-Source to 'OBJ'
$ !
$ if f$search("DVIDECW.C") .eqs. "" then goto compile_uil
$ !
$ vue$set_task_label "CC DVIDECW"
$ vue$popup_progress_box
```

```

$ cc /define=("OS_VAXVMS"=1) /define=("ANSI_LIBRARY"=1) dvidecw
$ !
$ !
$compile_uil:
$ !
$ if f$search("DVIDECW.UIL") .eqs. "" then goto do_link
$ !
$ ! Compile the 'UIL'-Source to 'UID'
$ !
$ vue$set_task_label "UIL DVIDECW"
$ vue$popup_progress_box
$ uil dvidecw.uil
$ !
$do_link:
$ !
$ ! Link the DEC-Windows program
$ !
$ vue$set_task_label "LINK DVIDECW"
$ vue$popup_progress_box
$ !
$ link /exe=dvidecw.exe -
  sys$input:/options
  dvidecw.obj
  unixclib/lib
  sys$library:vaxctrl/lib
  sys$share:decw$dwlibshr/share
$ !
$ !
$ ! Change APPLY button to UPDATE button on FileView
$ !
$ vue$highlight_update
$end:
$ exit
$ !
$error:
$ vue$set_error_status
$ exit

```

A.2 DVILINK.COM

Command file to link *DVIDECW*

```

$ !-----!
$ ! Filename: DVILINK.COM !
$ ! Function: Links the DVIDECW DEC-Windows application (neccessary if !

```

```

$ !           DVIDECW will run under a VMS version  other than 5.3)  !
$ ! Important:There will be a linker warning message for multiply  !
$ !           defined Symbols QSORT and SYSTEM, this can be ignored  !
$ ! (c) 21-03-90 by Ch. Markus  !
$ !-----!
$ !
$ !
$ vue$set_task_label "LINK DVIDECW"
$ vue$popup_progress_box
$ !
$ link /exe=dvidecw.exe -
  sys$input:/options
  dvidecw.obj
  unixclib/lib
  sys$library:vaxcrtl/lib
  sys$share:decw$dwtlibshr/share
$ !
$ !
$ ! Change APPLY button to UPDATE button on FileView
$ !
$ vue$highlight_update
$ exit

```

A.3 TEXVIEW.COM

Integration of *DVIDECW* in *FileView* menu bar

```

$ !-----!
$ ! Filename: TEXVIEW.COM  !
$ ! Function: This is the interface between DECWindow FILEVIEW and the!
$ !           DVIDECW Tex Preview driver which runs in the DECWindows !
$ !           environment. Fileview selections are scanned and passed !
$ !           in the command line.  !
$ ! (c) 19-06-90 by Christian MARKUS  !
$ !-----!
$ !
$ ! These definitions supersede global definitions and have to be
$ ! corrected in other environments
$ !
$ define/nolog TEX_FONTS $DISK0:[TEX29.DVI.CM.]  !path for fonts
$ define/nolog TEX_INPUTS $disk1:[1050101.dvidecw] !path for .UID file
$ dvidecw := $$disk1:[1050101.dvidecw]dvidecw  !path for .EXE file
$ !
$ ! Check if files are selected in FileView
$ !

```

```

$ vue$get_selection_count
$ vue$read count
$ !
$ ! If files are selected then go on processing
$ !
$ if count .ne. 0 then goto get_file
$ !
$ ! Ask for filename
$ !
$ vue$inquire_symbol "VUE$TEXVIEW_DVI Filename:"
$ vue$read selection
$ !
$ ! Check for valid filename
$ !
$ if ""'selection'".eqs. "" then goto end
$ goto do_dvi
$ !
$ ! Get Filename from FileView selection
$ !
$get_file:
$ vue$get_next_selection
$ vue$read selection
$ !
$ ! Start DVIDECW with filename argument
$ !
$do_dvi:
$ !
$ ! Extract the filename from selection
$ !
$ filename= "'f$parse(selection,,,"NAME")'"
$ !
$ ! Check if file exists
$ !
$ if f$search("'filename'+".dvi") .eqs. "" then goto end
$ !
$ ! Ask for processing parameter
$ !
$ vue$inquire_symbol "VUE$TEXVIEW Parameter:"
$ vue$read parameter
$ !
$ ! Write info box
$ !
$ vue$set_task_label "DVIDECW "'filename'"
$ vue$popup_progress_box
$ !

```

```
$ dvidecw 'filename' 'parameter'  
$ !  
$end:  
$ exit
```