hdrff Installation

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1. Installation

Currently, no standard packages for your favorite distribution are available. But installation is simple, just run:

```
        $ > su -c"make install"
```

Depending on your distribution, you might also have to run

```
        $ > sudo make install
```

This will install the binary to `/usr/local/bin/hdrff` and the modules to `/usr/local/lib/hdrff`. If you prefer a different location (e.g. `/usr`), you can pass `PREFIX=/usr` to make.

Installation will also generate the global system-wide configuration file `/etc/hdrff.conf`. If this file already exists, the installation will create `/etc/hdrff.conf.new` instead. In this case you have to merge the new configuration-variables into your existing file manually (this might change in the future, although I am not very confident about this issue).

2. Prerequisites

You need the following packages if you want to use all features of hdrff:

- ImageMagick
- ufraw
- exiftool
- enblend-enfuse
- hugin
- pfstools
- pfscalibration
- pfstmo
- GIMP

Note that you only need all of these packages if you use all features of hdrff. E.g. if you don't create HDR-files but stick to the LDR-file created with enfuse, you don't need the last four packages (although you will certainly need GIMP because of other reasons).

To check for the necessary dependencies, run hdrff -c. If you see no output, all dependencies should be fulfilled.

3. Configuration

The configuration-system of hdrff knows four levels of configuration:

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1. program-internal (in `$PREFIX/lib/hdrff/hdrff.conf`)
2. system-wide (in `/etc/hdrff.conf`)
3. per user (in `$HOME/.hdrff/hdrff.conf`)
4. using environment-variables

If the user-specific configuration file does not exist, the first run of hdrff will create it. You can either create the configuration file manually, or run `hdrff -h` which will show the basic help-text and create the configuration file if it does not yet exist.

The configuration-files use the following syntax to set variables:

```
: ${varname:=varvalue}
```

This syntax will only set `varname`, if it is not already set. Therefore, values set in the environment won't be overridden by values in the configuration-files. Values set at the user-level will override values in the system-wide configuration file and so on. System administrators could prevent users from changing variables by using the syntax

```
varname=varvalue
```

in `/etc/hdrff.conf`.

hdrff is flexible, so there are a lot of configuration variables. The good news is, that you only have to set a few, since the defaults were carefully choosen. You should start with the following basic configuration:

```
: ${MEDIA:=/mnt/media}
: ${TARGET_DIR:=/data/images}
: ${IMG_EXT:=nef}
: ${IMG_PREFIX:=dsc_}
: ${IMG_DEPTH:=16}
: ${IMG_FIXCA:=0}
: ${IMG_ALIGN:=1}
: ${MODULES=enfuseModules}
: ${PREVIEW_MODE=1}
: ${PREVIEW_SIZE=1024}
```

MEDIA

`MEDIA` is the mount-point of your memory card. Many Linux-systems mount memory cards automatically, so you might check the mounted devices after inserting your memory card.

TARGET_DIR

`TARGET_DIR` is the root-directory of files on disk. Original files go to `$TARGET_DIR/orig`, edited files go to `$TARGET_DIR/work`. Note that you can configure these locations individually if you need to.

IMG_EXT

`IMG_EXT` is the extension of your images (e.g. jpg, nef, cr2). hdrff can currently only process one type of image at a time.

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IMG_PREFIX
`IMG_PREFIX` is the prefix of your images. Nikon typically uses `dsc_`, other typical prefixes include `crw_` or `img_`. `IMG_EXT` and `IMG_PREFIX` will be converted to lower-case automatically.

IMG_DEPTH
`IMG_DEPTH` will define the color-depth of the processed images. Note that for jpg-files `IMG_DEPTH` will be automatically set to 8.

IMG_FIXCA
With `IMG_FIXCA` you control the correction of chromatic aberrations and lens distortions. Since this is a very slow operation, the default sets `IMG_FIXCA=0`. It is no problem to set `IMG_FIXCA=1` in preview-mode.

IMG_ALIGN
Align the image-sequences. If you used a tripod and your images are perfectly aligned, you can set this variable to zero.

MODULES
This variable defines the list of modules or module-groups to run in case no modules are passed to hdrff on the commandline. Use `hdrff -H` to see a list of available modules and module-groups.

PREVIEW_MODE
Setting `PREVIEW_MODE` to one will speed up processing considerably, since all images are reduced to fit to `$PREVIEW_SIZE`. In a production run you would of course set `PREVIEW_MODE=0`.

PREVIEW_SIZE
Target size of all images. Only relevant if `PREVIEW_MODE=1`.

To fully exploit the power of hdrff, you should read the template configuration-file and change other variables as necessary. Also, see the user's guide and the reference.

4. Getting Started

Once everything is configured, you can just run `hdrff` and all input images are processed. Original files are copied to `$TARGET_DIR/orig`. You will find different intermediate files in `$TARGET_DIR/work`. With `MODULES=enfuseModules` the final images have the prefix `enf_`.

At this point, you can run additional modules, e.g.

```
$ > hdrff makeHDR tmMantiuk tmFattal makeGIMP
```

To go on, read the hdrff manpage and the user's guide.

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