

# Tool for building hierarchy of partitions - brief instructions

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The intention of these brief introduction is to make easy usage of the tool for building hierarchical image partitions. Please first download the source file of the tool and compile them in your computer by typing:

```
make all
```

The command synopsis of the tool is:

```
partitioning input_filename output_filename
```

where:

- `input_filename` - is the input TIFF <sup>1</sup> file. Only no compressed tiff images can be used.
- `output_filename` - is the name of the output files generated in order of precedence i.e. `output_filename.1.tif` for the partition on the first level, `output_filename.2.tif` for the image on the second level and so on, until the top of the pyramid.

To make the usage of the tool more clearly an example is given. Let the input file name be `lena.tif` <sup>2</sup> and output file name be `res_lena`. The command to make image partitions of the input image is

```
partitioning lena.tif res_lena
```

The output of the program are images

```
res\_lena.1.tif, res\_lena.2.tif, ..., res\_lena.t.tif
```

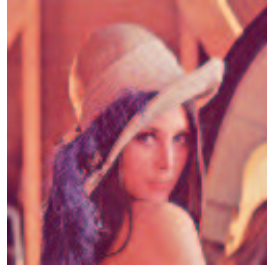
where  $t$  is the highest level of the pyramid achieved. The results of the tool using the `lena.tif` of size  $128 \times 128$  with the constant  $\tau = 2000$  are given in the Figure 1. If you would like to have different constant  $\tau$ , please edit the text file found in the directory `param_settings/threshold.txt` to set to other constant. For more insight into the theory behind, see TR-81-PRIP.

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<sup>1</sup>Tag Image File Format. More info <http://www.adobe.com>

<sup>2</sup>Waterloo image database

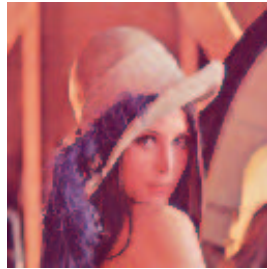
Original Image



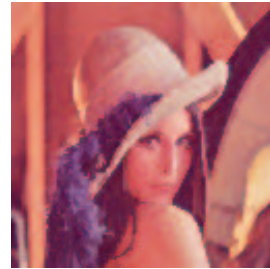
Levels of the Pyramid



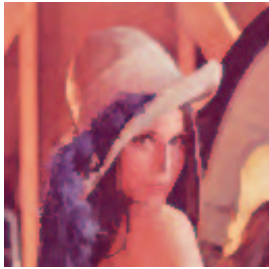
1



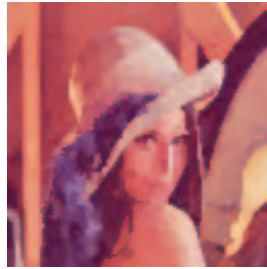
2



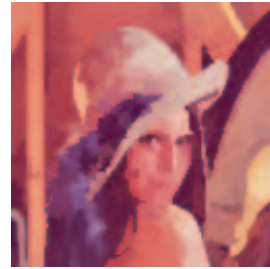
3



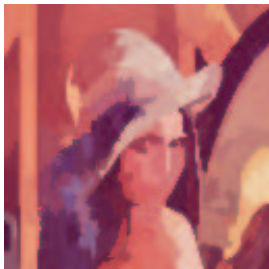
4



5



6



7



8



9



10



11



12



13



14