Image Processing
Home work 07
Image Compressions

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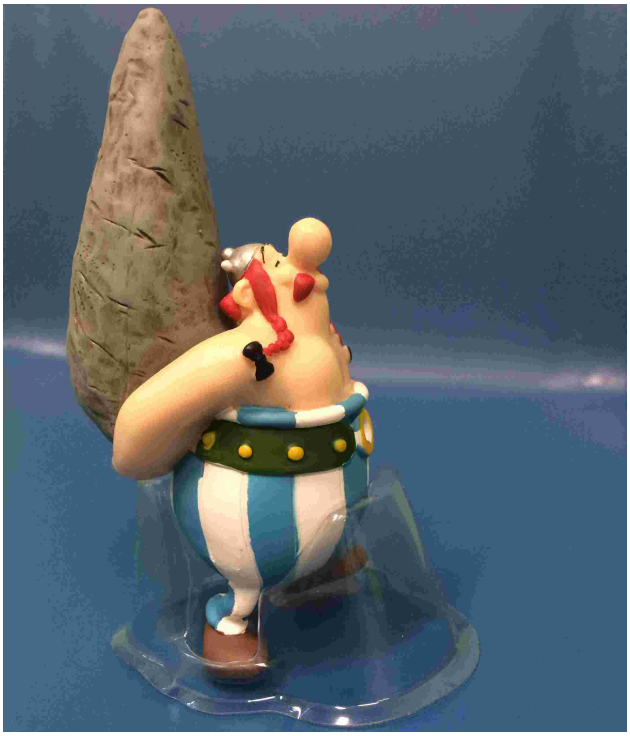
(a) Original



(b) Opencv compression

(c) My way Compression

Fig. 1: Shows compression comparison between original , opencv compression , my way compression

To accomplish the previous results I used the following code :

```
import cv2
import numpy as np
from math import floor
def showimg(img):
    cv2.namedWindow("test", cv2.WINDOW_NORMAL)
    img = np.array(img,dtype=float)/float(255)
    cv2.imshow('test',img)
    cv2.resizeWindow('test',600,600)
    cv2.waitKey(0)

```

```
11 def readimg(name):
12     return cv2.imread(name)
13
14 obe = readimg('Obelix.jpg')
15
16 def compressWay1(obe,quality):
17     cv2.imwrite('obe_CV2_{}.jpg'.format(quality), obe, [int(cv2.IMWRITE_JPEG_QUALITY), quality
       ])
18
19 def compressWay2(obe,quality):
20     lvls =floor(quality*255/100)
21     step = floor(255/lvls)
22     value = floor(step/2)
23     print 'levels:{},step:{},value:{},quality:{}'.format(lvls,step,value,quality)
24     nm = []
25     for i in range(256):
26         nm.append(value)
27         if i%step==0 and i!=0:
28             value+=step
29     table = np.array(nm)
30     obe = cv2.LUT(obe, table)
31     cv2.imwrite('obe_MYWAY_{}.jpg'.format(quality),obe)
32     print nm
33
34 compressWay1(obe,10)
35 compressWay2(obe,10)
```

Note: All images,.tex,.pdf,.jpg,.py etc.. files exist on Github

E.O.F