Subject: Re: tif image 16 bit. autolevel
Posted by tojocky on Mon, 02 May 2011 14:21:21 GMT
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I thing this is what I look for:
http://en.wikipedia.org/wiki/Histogram_equalisation
I did a variant of autolevel, but I intend to modify by wikipedia specification.

```
Image ImageAutolevel(const Image& img){
 uint64 histogram[256];
 for(int i=0;i<256;++i)
  histogram[i]=0;

 const RGBA *start = img;
 const RGBA *s = start;
 const RGBA *e = s + img.GetLength();
 while(s < e){
  histogram[(s->r+s->g+s->b)/3]++;
  s++;
 }
 int v_lower = -1;
 int v_upper = -1;

 for(int i=0;i<256&&(v_lower==-1||v_upper==-1);++i){
  if(v_lower==-1&&histogram[i]!=0)
   v_lower = i;
  if(v_upper==-1&&histogram[255-i]!=0)
   v_upper = 255-i;
 }

 // return if not sense to autolevel
 //if(v_lower==v_upper==-1)

 if(v_lower==-1)
  v_lower = 0;

 if(v_upper==-1)
  v_upper = 255;

 s = start;
 ImageBuffer w(img.GetSize());
 Unmultiply(w);
 RGBA *t = w;

 while(s < e) {
  t->r = s->r*255/v_upper;
  t->g = s->g*255/v_upper;
  t->b = s->b*255/v_upper;
```

```
  t->a = s->a;
  t++;
  s++;
 }
 Premultiply(w);
 w.SetHotSpots(img);
 return w;
}
```