Subject: Re: Image error calculation
Posted by Brian Daniel on Thu, 01 Apr 2010 16:22:22 GMT
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Image quality is a current field of research. Check out SPIE or OSA journals if you're really interested in more detailed metrics. If you're not, I suggest taking the root mean squared error between your images. IDL's element by element algebra is very handy for this.

Best,
Brian

On Apr 1, 3:42 am, Maxwell Peck <maxjp...@gmail.com> wrote:
> I have a feeling there is probably a 'proper' way to do this but
> perhaps you could use something like Sobel edge detection filter
> (http://idlastro.gsfc.nasa.gov/idl_html_help/SOBEL.html) which
> calculates the magnitude of the gradients in the image. Sharper lines
> I would think have a larger gradients than blurred areas so perhaps a
> difference between the Sobel detected 'improved' image and the Sobel
> detected original image may give some indication? I'm not sure if
> you'd have to average the result somehow because of the blurring
> itself though...
>
> Max
>
> On Apr 1, 2:07 pm, Suguru Amakubo <sfa2...@googlemail.com> wrote:
>
>
>
>> Sorry about that, what I will consider to be a better quality image is
>> that the details of the structures (DNA) could be identified better.
>
>> So in a nutshell if I see the new image and see more details that was
>> previously unidentifiable (due to partial bluring) that I consider to
>> be a better image. A 'sharper' image will probably best describe it.
>> However the problem lies in quantifying it. (Since saying this image
>> looks better just won't do. It needs to be: e.g. x % better than the
>> original image).
>
>> As for the how I made the image, I basically used one image as a
>> 'base' and the took 22 different images of the same DNA that was taken
>> immediately after each other and then split the new image into smaller
>> subset images and mathematically found a point that is considered to
>> be similar and placed it on top of it (then divided to get the end
>> image).
>
>> My aim therefore is to compare the base image with the new image and

>> determine quantitatively by what degree the image has improved.
>
>> Sorry about the lack of explanation. Please tell me if the above needs
>> explaining further.
>
>> Suguru
