
Subject: Very complicated visualization problem
Posted by [khaldan](#) on Sat, 26 Apr 2008 01:31:24 GMT
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Dear members,

I have a complicated visualization problem I am trying to solve almost one week!!!. Let me please explain it analytically.

- 1- I have a three-channel image $\text{img} = [500, 500, 3]$.
- 2- I compared the values of each element in each channel and wrote the max one in a new three-channel array $\text{imgmx} = [500, 500, 3]$. So, the first channel $\text{imgmx}[500, 500, 0]$ contains all the elements of the image where $\text{img}[i, j, 0] \geq \text{img}[i, j, 1]$ and $\text{img}[i, j, 0] \geq \text{img}[i, j, 2]$ and 0B for the rest of the elements of the first channel. The second channel $\text{imgmx}[500, 500, 1]$ contains all the elements of the image where $\text{img}[i, j, 1] \geq \text{img}[i, j, 0]$ and $\text{img}[i, j, 1] \geq \text{img}[i, j, 2]$ and 0B for the rest of the elements of the second channel. And the same thing for the third channel $\text{imgmx}[500, 500, 2]$.
- 3- I calculated the histogram of each channel of the array $\text{imgmx} = [500, 500, 3]$ separately. So, I have hist1 for the first channel $\text{imgmx}[500, 500, 0]$, hist2 for the second channel $\text{imgmx}[500, 500, 1]$ and hist3 for the third channel $\text{imgmx}[500, 500, 2]$.
- 4- I segmented each histogram in some of its local minima. For example, hist1 is segmented in the local minima $s1 = [s3, s7]$ (three segments in the first channel), the hist2 in the local minima $s2 = [s1, s4, s5]$ (four segments in the second channel), and the hist3 in the local minima $s3 = [s2, s3, s5, s9]$ (five segments in the third channel).

Now the BIG question is how to visualize the segments of the three histogram all together. So, I want to tv the array $\text{imgmx} = [500, 500, 3]$ and instead of showing the value of the elements, I want to see the segments all together. It is important to mention that the segments are NOT overlapped. For example, I want all the elements of the first channel of imgmx wish lays between $s0$ and $s3$ to have their won color, the elements which lays between $s3$ and $s7$ to have their won color and the elements which lays between $s7$ and the end of the histogram to have their won color, and so on for the second and the third channels. AGAIN I want to visualize all the segments of the three channels together, with each segment to have its won color!!!.

Please any help in this complicated problem.

Khaldan
