Subject: Re: the length of line
Posted by Kenneth P. Bowman on Tue, 04 Jun 2002 12:17:21 GMT
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In article <adgr20$5r5$1@dipsy.missouri.edu>,
"Xiaoying Jin" <xje4e@mizzou.edu> wrote:

> How can I trace this line and get the length of the line?

With n pixels at coordinates (i,j)

length = TOTAL(SQRT((i[0:n-2]-i[1:n-1])^2 + (j[0:n-2]-j[1:n-1])^2))

Ken

Subject: Re: the length of line
Posted by Xiaoying Jin on Tue, 04 Jun 2002 15:25:36 GMT
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"Kenneth P. Bowman" <kpb@null.com> wrote in message
news:kpb-232A7A.07172004062002@corp.supernews.com...
> In article <adgr20$5r5$1@dipsy.missouri.edu>,
> "Xiaoying Jin" <xje4e@mizzou.edu> wrote:
>
>> How can I trace this line and get the length of the line?
>
> With n pixels at coordinates (i,j)
>
> length = TOTAL(SQRT((i[0:n-2]-i[1:n-1])^2 + (j[0:n-2]-j[1:n-1])^2))

In that case, you still need to trace the line and order the points on the
line. That's my question.
And in my case, there are a lot of branchs on the line, we still need to sum
the length of these branchs up.

Xiaoying Jin

Subject: Re: the length of line
Posted by Eric Vella on Tue, 04 Jun 2002 17:22:44 GMT
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To really solve this problem as you have outlined it, you probably need some
clever recursive algorithm for traversing the line and following all
branches, summing the length as you go. You might want to separate the
"line" into blocks connected purely by straight segments, separated from

other blocks by diagonal connections. The "length" of each block is then the number of pixels, and each extra block extends the length of the line by an additional diagonal. If you only need an approximate length, why not ignore the diagonals and simply count pixels?

"Xiaoying Jin" <xje4e@mizzou.edu> wrote in message
news:adgr20$5r5$1@dipsy.missouri.edu...
> Hi, there,
>
> I have an image having a line on it. The line has one-pixel width. The
> approxiamate method to calculate the length of the line is like this:
> the length is calculated as the sum of distances between adjacent pixels
on
> the line, where 1 is the vertical or horizontal distance between adjacent
> pixels and sqrt(2) is the distance between pixels on diagonals.
>
> My question is:
> How can I trace this line and get the length of the line?
>
> Any suggestion will be appreciated.
>
> Regards,
>
> Xiaoying Jin
>
>

Subject: Re: the length of line
Posted by Kenneth P. Bowman on Tue, 04 Jun 2002 18:02:48 GMT
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In article <adilpshdb1@dipsy.missouri.edu>,
"Xiaoying Jin" <xje4e@mizzou.edu> wrote:

> In that case, you still need to trace the line and order the points on the
> line. That's my question.
> And in my case, there are a lot of branchs on the line, we still need to sum
> the length of these branchs up.

Sorry, I misunderstood. What are the pixel coordinates coming from?
CONTOUR, for example, will return the coordinates of contour lines.

Ken
