
Subject: Re: thinning operation
Posted by [Craig Markwardt](#) on Sat, 14 Jul 2001 00:22:15 GMT
[View Forum Message](#) <> [Reply to Message](#)

julia65201@usa.net (Julia) writes:

> Hi, there,
>
> In IDL, the THIN function returns the "skeleton" of a bi-level image.
> But if it is a line, the result is shorter than the original one. How
> can I prevent that?

Make sure your lines don't have ends?

Craig

:~)

--

Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response

Subject: Re: thinning operation
Posted by [julia65201](#) on Sat, 14 Jul 2001 05:11:48 GMT
[View Forum Message](#) <> [Reply to Message](#)

What I mean is that if it is a curve line with variable width, how can
I get the not-shorten skeleton. Do you mean it's impossible?

Julia

Craig Markwardt <craigmnet@cow.physics.wisc.edu> wrote in message
news:<on66cw7420.fsf@cow.physics.wisc.edu>...

> julia65201@usa.net (Julia) writes:
>
>> Hi, there,
>>
>> In IDL, the THIN function returns the "skeleton" of a bi-level image.
>> But if it is a line, the result is shorter than the original one. How
>> can I prevent that?
>
> Make sure your lines don't have ends?
>
> Craig
>

> :-)

Subject: Re: thinning operation

Posted by [Thomas S. Spisz](#) on Tue, 17 Jul 2001 17:30:19 GMT

[View Forum Message](#) <> [Reply to Message](#)

I'm not sure whether it's impossible, but I do know that most thinning algorithms will shorten the line (especially with variable width). I've used the 'THIN' function and also implemented in IDL some algorithms published in literature such as ones by Zhang and Suen. What I've done about the line shortening effect is to return the end pixels of each line. This is done by extending points from the thinned line in the direction of the last two pixels and comparing it to the original thick line. If there was a pixel in the thick line, then extend the thin line one pixel and keep going. I described this in the journal:

Medical & Biological Engineering & Computing, November, 1998.

authors: Spisz, T.S.; Fang, Y.; Reeves, R.H.; Seymour, C.K.; Bankman, I.N.; Hoh, J.H.;

By your questions and your previous question about 'LABEL_REGION', I'm guessing that you are trying to find the length of certain things in an image. I've published a couple papers on this in addition to the one I listed above.

Hope this helps.

--tom spisz

Julia wrote:

> What I mean is that if it is a curve line with variable width, how can
> I get the not-shorten skeleton. Do you mean it's impossible?
>
> Julia
>
> Craig Markwardt <craigmnet@cow.physics.wisc.edu> wrote in message
news:<on66cw7420.fsf@cow.physics.wisc.edu>...
>> julia65201@usa.net (Julia) writes:
>>
>>> Hi, there,
>>>
>>> In IDL, the THIN function returns the "skeleton" of a bi-level image.
>>> But if it is a line, the result is shorter than the original one. How

</html>

[View Forum Message](#) <> [Reply to Message](#)

 julia65201@usa.net (Julia) writes:

```
<br>>  
<br>> > Hi, there,  
<br>> >  
<br>> > In IDL, the THIN function returns the "skeleton" of a bi-level  
image.  
<br>> > But if it is a line, the reslut is shorter than the original one.  
How  
<br>> > can I prevent that?  
<br>>  
<br>> Make sure your lines don't have ends?  
<br>>  
<br>> Craig  
<br>>  
<br>> :-)</blockquote>  
</html>
```

Subject: Re: thinning operation
Posted by [Thomas S. Spisz](#) on Tue, 17 Jul 2001 17:37:55 GMT
[View Forum Message](#) <> [Reply to Message](#)

```
<!doctype html public "-//w3c//dtd html 4.0 transitional//en">
<html>
I'm not sure whether it's impossible, but I do know that most thinning
algorithms will shorten the line (especially with variable width).&nbsp;
I've used the 'THIN' function and also implemented in IDL some algorithms
published in literature such as ones by <i>Zhang and Suen</i>.&nbsp; What
I've done about the line shortening effect is to return the end pixels
of each line.&nbsp; This is done by extending points from the thinned line
in the direction of the last two pixels and comparing it to the original
thick line.&nbsp; If there was a pixel in the thick line, then extend the
thin line one pixel and keep going.&nbsp; I described this in the journal:
<br>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;<i>Medical & Biological Engineering & Computing</i>,
November, 1998.
<br>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;authors:&nbsp; Spisz, T.S.; Fang, Y.; Reeves, R.H.;
Seymour, C.K.; Bankman, I.N.; Hoh, J.H.;&nbsp;
<p>By your questions and your previous question about 'LABEL_REGION', I'm
guessing that you are trying to find the length of certain things in an
image.&nbsp; I've published a couple papers on this in addition to the
one I listed above.
<p>Hope this helps.
<p>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;--tom spisz
<br>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;
<br>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;
<p>Julia wrote:
<blockquote TYPE=CITE>What I mean is that if it is a curve line with variable
width, how can
<br>I get the not-shorten skeleton. Do you mean it's impossible?
```

<p>Julia
<p>Craig Markwardt <mailto:craigmnet@cow.physics.wisc.edu> wrote in message
news:<on66cw7420.fsf@cow.physics.wisc.edu>...

> julia65201@usa.net (Julia) writes:

>

> > Hi, there,

> >

> > In IDL, the THIN function returns the "skeleton" of a bi-level
image.

> > But if it is a line, the result is shorter than the original one.
How

> > can I prevent that?

>

> Make sure your lines don't have ends?

>

> Craig

>

> :)/</blockquote>
</html>

Subject: Re: thinning operation
Posted by [Thomas S. Spisz](#) on Tue, 17 Jul 2001 17:38:33 GMT
[View Forum Message](#) <> [Reply to Message](#)

I'm not sure whether it's impossible, but I do know that most thinning algorithms will shorten the line (especially with variable width). I've used the 'THIN' function and also implemented in IDL some algorithms published in literature such as ones by Zhang and Suen. What I've done about the line shortening effect is to return the end pixels of each line. This is done by extending points from the thinned line in the direction of the last two pixels and comparing it to the original thick line. If there was a pixel in the thick line, then extend the thin line one pixel and keep going. I described this in the journal:
Medical & Biological Engineering & Computing, November, 1998.
authors: Spisz, T.S.; Fang, Y.; Reeves, R.H.; Seymour, C.K.; Bankman, I.N.; Hoh, J.H.;

By your questions and your previous question about 'LABEL_REGION', I'm guessing that you are trying to find the length of certain things in an image. I've published a couple papers on this in addition to the one I listed above.

Hope this helps.

--tom spisz

Julia wrote:

```
> What I mean is that if it is a curve line with variable width, how can
> I get the not-shorten skeleton. Do you mean it's impossible?
>
> Julia
>
> Craig Markwardt <craigmnet@cow.physics.wisc.edu> wrote in message
news:<on66cw7420.fsf@cow.physics.wisc.edu>...
>> julia65201@usa.net (Julia) writes:
>>
>>> Hi, there,
>>>
>>> In IDL, the THIN function returns the "skeleton" of a bi-level image.
>>> But if it is a line, the result is shorter than the original one. How
>>> can I prevent that?
>>
>> Make sure your lines don't have ends?
>>
>> Craig
>>
>> :-)
```

Subject: Re: thinning operation

Posted by [Thomas S. Spisz](#) on Tue, 17 Jul 2001 17:42:19 GMT

[View Forum Message](#) <> [Reply to Message](#)

I'm not sure whether it's impossible, but I do know that most thinning algorithms will shorten the line (especially with variable width). I've used the 'THIN' function and also implemented in IDL some algorithms published in literature such as ones by Zhang and Suen. What I've done about the line shortening effect is to return the end pixels of each line. This is done by extending points from the thinned line in the direction of the last two pixels and comparing it to the original thick line. If there was a pixel in the thick line, then extend the thin line one pixel and keep going. I described this in the journal:

Medical & Biological Engineering & Computing, November, 1998.

authors: Spisz, T.S.; Fang, Y.; Reeves, R.H.; Seymour, C.K.; Bankman, I.N.; Hoh, J.H.;

By your questions and your previous question about 'LABEL_REGION', I'm guessing that you are trying to find the length of certain things in an image. I've published a couple papers on this in addition to the one I

listed
above.

Hope this helps.

--tom spisz

Julia wrote:

```
> What I mean is that if it is a curve line with variable width, how can
> I get the not-shorten skeleton. Do you mean it's impossible?
>
> Julia
>
> Craig Markwardt <craigmnet@cow.physics.wisc.edu> wrote in message
news:<on66cw7420.fsf@cow.physics.wisc.edu>...
>> julia65201@usa.net (Julia) writes:
>>
>>> Hi, there,
>>>
>>> In IDL, the THIN function returns the "skeleton" of a bi-level image.
>>> But if it is a line, the reslut is shorter than the original one. How
>>> can I prevent that?
>>
>> Make sure your lines don't have ends?
>>
>> Craig
>>
>> :-)
```
