Subject: Re: Compute area between curves
Posted by jameskuyper on Tue, 14 Oct 2008 17:21:15 GMT
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Craig Markwardt wrote:
> James Kuyper <jameskuyper@verizon.net> writes:
>
>
>> Craig Markwardt wrote:
>>> James Kuyper <jameskuyper@verizon.net> writes:
>>>> A more general approach would would work regardless of the shapes of
>>>> the two curves. Just connect the two curves to create a single
>>>> combined curve that starts by listing all the points on one curve in
>>>> clockwise order, then continues by listing all of the points of the
>>>> other curve in counter-clockwise order. As a result, the combined
>>>> curve encloses the area that lies between the two curves. Then use
>>>> POLY_AREA to calculates the area enclosed by the combined curve.
>>> ...
>>> James, I had that thought as well, but I believe POLY_AREA will not
>>> work as expected. When a polygon's edges self-intersect, then the
>>> polygon is no longer "simple."
>>
>> As I understand it, the curves involved are sections of two
>> non-intersecting ellipses, with the smaller enclosed entirely in the
>> larger one. Connecting the curves as I suggest would create a simple
>> closed curve, with no intersections.
>
> Assuming the poster knows what he wants to do, he said,
> : I am trying to calculate how much of an error there is between two
> : rings. I have two images each with a ring pictured in these two
> : images.
> [And then goes on to describe how the two traces are computed by
> different methods.] In my mind, the two traces are measures of
> essentially the *same* phenomenon, and he's trying to measure the
> areal difference between these two different representations of the
> same curve. I assumed this was some attempt to estimate the
> uncertainty of some modeling method.

I traced the message I was responding to back to the original message,
in which he said that he was looking for the area between the curves.
The message you're referring to was on a different branch of this
discussion, and I missed the implications of the text you cite. Now
that I've re-read it in light of what you've said, I agree with your
interpretation. I can think of two or three bad ways to measure the
error between the two curves, but I can't come up with any good ways.

> In fact, if you look at the image links the original poster provides,
> the curves *are* intersecting. There is primarily a translation

> offset, which causes them to intersect near the apex.

As displayed on my screen, I only saw one curve; perhaps I don't have
enough resolution to resolve the two curves clearly.