Subject: Re: Pixel positions passing trough a curve
Posted by Helder Marchetto on Tue, 11 Oct 2016 13:05:58 GMT
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On Tuesday, October 11, 2016 at 2:36:44 PM UTC+2, miguelfigue...@gmail.com wrote:
> Hi everyone,
>
> I am trying to construct a program that produces a position-velocity diagram whose shape can be fitted by a certain equation (and plotted).
>
> I wanted to know if it was possible to obtain somehow the pixels position trough a path I choose. For example, I draw a line (in ds9) from (0,0) to (10,0) and I want to know which pixels represent the line. In this case, the program would give (0,0), (1,0), (2,0),...,(10,0). The thing is that I want to draw an arbitrary path (not necesarily in ds9) and get automatically the points.
>
> For the moment, I put a circle, in ds9, in each pixel of the path and obtain the list of pixel positions and saving the region in xy format. I use this catalogue as an input of my program.
> If there is a way to do it automatically (or some ideas) or an already existing program, I would like to know more.
>
> Thank you,
> Miguel

A counter-question: if going from (0,0) to (10,10), would you want:
(a) (0,0), (1,1), (2,2),...,(9,9),(10,10)
(b) (0,0), (1*cos(45),1*sin(45)), (2*cos(45),2*sin(45)), ...

That said, as you can see, it's all about trigonometry and getting the details right. I've done this quite a few time using approach (b). If you wish, I can clean this up a bit and send it to your private email. Be aware that I've added a small degree of complexity by averaging along the perpendicular of x-pixel width (smoothens out the signal a bit).

cheers, Helder