Subject: Re: One ellipse to rule them all
Posted by Vince Hradil on Tue, 12 Feb 2008 00:40:56 GMT
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On Feb 11, 5:55 pm, Vince Hradil <hrad...@yahoo.com> wrote:
> On Feb 11, 5:06 pm, ianpaul.free...@gmail.com wrote:
>
>> On Feb 11, 4:51 pm, David Fanning <n...@dfanning.com> wrote:
>
>>> ianpaul.free...@gmail.com writes:
>>>> I'm hoping someone has done this before and can help me out.
>
>>>> I have a bunch of x,y points, and I'd like to find the ellipse (with
>>>> minimum area) that encompasses all of them. Any thoughts?
>
>>> I can show you how to find an ellipse:
>
>>> http://www.dfanning.com/ip_tips/fit_ellipse.html
>
>>> To enclose all the points I would, uh, expand it
>>> slowly. :-)
>
>>> Cheers,
>
>>> David
>
>>> --
>>> David Fanning, Ph.D.
>>> Fanning Software Consulting, Inc.
>>> Coyote's Guide to IDL Programming (www.dfanning.com)
>>> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
>
>> My gut tells me I should be able to do it analytically. I *think* the
>> two points that have the largest separation should define the major
>> axis and position angle. Then I just need to fit for the minor axis
>> from the rest of the points, and the largest one is the winner.
>
> Look here - and references therein:http://www-eleves-isia.cma.fr/documentation/CgalDoc2
.4/basic_lib/Opti...

Here's Welzl's paper: http://citeseer.ist.psu.edu/235065.html