Subject: Re: polar interpolation
Posted by James Kuyper on Fri, 10 Jan 2003 16:05:24 GMT
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Thomas Gutzler wrote:
>
> Good morning,
>
> I am looking for a function that can do a polar interpolation of a
> [2,n]-array.
> What I don't want is to convert polar koordinates to rect, interpolate,
> and reconvert them to polar.

If you have data that comes close to the pole, that's precisely what you should do. Otherwise, you're going to see some very bizarre results in that vicinity. The pole is a singular point in that coordinate system, and you can only approach it by using a coordinate system where it isn't a singular point.

If you don't come close to the pole, you should be able to use ordinary interpolation routines, treating rho, theta as if they were x and y. That won't produce exactly the right results, but anything that produces exactly the right results is going to be mathematically equivalent to converting back to rectangular coordinates.