Subject: Re: How do I morph an image.
Posted by Marc Reinig on Sat, 07 Aug 2004 18:13:46 GMT
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David,

Thanks, for the response. I'll try your suggestions. Also, I'll send the images.

Marco

"David Fanning" <davidf@dfanning.com> wrote in message news:MPG.1b7eb98e4d7ba51a989815@news.frii.com...
> Marc Reinig writes:
>
>> I need to compensate images for optical distortion (barrel, pincushion, ...)
>> in my system.
>>
>> I have a reference image (a grid of identifiable features) and I can tell
>> how the system if distorting it by comparing the reference image to the
>> captured, distorted image.
>>
>> Currently I have a table of points of the center of the original features
>> and a table of the center of these features in the distorted image. A
>> Matlab program is used to correct the images of interest based on these
>> tables.
>>
>> I need to integrate this process into my IDL code.
>>
>> Any pointers on how to morph an arbitrary image using these tables or
>> another technique would be appreciated.
>
> There are at least two methods you can use to do this.
> Suppose your input control points are in the vectors
> xi and yi and your reference control points are in
> the vectors xo and yo. You can do something like
> this with the WARP_TRI command:
>
> s = Size(refImage, /Dimensions)
> warpedImg = Warp_Tri(xo, yo, xi, yi, inputImage, $
> OUTPUT_SIZE=s, /QUINTIC)
>
> (There may be other keywords to set depending upon the
> location and number of your control points, etc. I
> assume here four of your control points are in the

> corners of the image.)
>
> Another method involves the POLYWARP and POLY_2D
> commands. First, use POLYWARP to get the coefficients
> required by POLY_2D for the warping:
>
>   POLYWARP, xi, yi, xo, yo, 1, p, q
>
> Then use the p and q arrays to warp the image:
>
>   warpedImg = POLY_2D(inputImage, p, q, 1, s[0], s[1])
>
> You can try both and see which is better for your
> application.
>
> Cheers,
>
> David
>
> P.S. If you would like to e-mail the images to me,
> I would be happy to write an article about this
> and show the before and after results.
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming: http://www.dfanning.com/
