Subject: Re: Zooming in place
Posted by David Fanning on Mon, 31 Oct 2005 17:15:29 GMT
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Pravish writes:

> Zooming in place is one feature that does not seem to be popular with
> IDL users. It is really strange that we are satisfied with the zoomed
> image being in another window. That does not allow us to work with the
> zoomed image. We can just view at the zoom image. I would like to zoom
> on an image, in place and not in a separate window, and then work on
> this image and if need be, zoom back. But, I am using a draw widget to
> work with the image. That might seem to make things more complex.
>
> I have seen David's Zimage program and I think I could play around with
> it and with some modifications, I will be able to use it.
>
> Any thoughts on this one?

Zooming in place is one of those things that sound like a good
idea until you start to implement it. Then you find it burdened
with one constraint or another that make it more difficult to
implement than you initially thought it was going to be.

For example, if you allow the user to select the zoomed area,
then you have problems of selection aspect ratio verses window
aspect ratio. If you don't allow selection, then you have to
determine how to allow the user to indicate selection, how much
to zoom, etc.

The biggest challenge, though, is going from a device coordinate
system to the "data" coordinate system of the image in the zoomed
window. It it not trivial to figure out where exactly you are in
the image when you are in a display window.

Once you have figured all this out once or twice, it is not something
you really want to do again. So I would advise writing an image
object that can do it all for you. Your image will need the ability
to set up both a "normal" and "zoomed" coordinate system. You will
need, probably, both the original image and a "display" image. (You
might be able to create this on the fly.) You will need a method that
can convert a point in window space to an image coordinate (the image
"data" space) and visa versa, which means you will need an image that
knows where it is in the display window.

You can build all this yourself (it will take less than a week,
probably), or (if you have some money) you can talk to me about my
Catalyst Library. The tools to do all this (in fact the image object

itself) are already in place. :-)

Cheers,

David
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