Subject: Re: Manipulation with 4D data in iVolume tool
Posted by rtk on Fri, 20 Apr 2012 21:01:03 GMT
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On Apr 20, 11:55 am, Elena Nasonova <nasonova...@googlemail.com>
wrote:
> I have a set of medical data (66*66*124*40) where the 4th dimension is
> a number of time frames. The goal is to visualize dynamically the 3D
> data in all moments of time to detect motion of object (the heart in
> case of PET cardiac data).
> The problem: straightforward display of each volume set in iVolume
> results in a very poor quality, noisy and without much details.
> Could you please suggest how to proceed in this case? Namely, 1) how
> to keep iVolume figure opened with data automatically updated when a
> user manipulates with it from a command line; 2) alterations in which
> parameters potentially can bring improvement in image quality; 3) does
> it make sense to visualize series of 3D volumes in one window using
> the loop or you would approach this problem differently? Thank you.

Take a look at IDLgrVolume and xobjview. In newer versions of IDL
you
can rotate the view and update the data easily.

For example (assuming IDL 8.0+),

v = bytscl(randomu(seed,100,100,100))
o = IDLgrVolume(v, /interpolate)
xobjview, o, tlb=tlb
o->SetProperty, data0=bytscl(randomu(seed,100,100,100))
xobjview, refresh=tlb

This will create the visualization and then update the data in the
visualization. I think this would work for your 4D data set. Look at
the help for xobjview and IDLgrVolume for control and hints on
improving rendering.

Ron