
Subject: Re: How to export programmatically a volume with IVOLUME to images
Posted by [David Fanning](#) on Tue, 20 May 2008 02:08:09 GMT

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yingjie, Peng writes:

> I would like to make a short animation of my rotating volume data. I
> think this could be done by rotating the volume a small angle each
> time and export corresponding image and then put the images sequence
> together. One can use XVOLUME, XVOLUME_ROTATE and XVOLUME_WRITE_IMAGE
> to get this job done easily, however ivOLUME offers more possible
> choices of configurations, which I prefer to.
>
> I already figured out how to rotate the ivolume object
> programmatically by:
> idTool =3D itgetcurrent(TOOL=3D oTool)
> temp =3D oTool->FindIdentifiers('*DATA SPACE',/VISUALIZATIONS)
> idDataSpace =3D temp[0]
> oDataSpace =3D oTool->GetByIdentifier(idDataSpace)
> oDataSpace->GetProperty, PARENT=3D oDataSpaceRoot
> oDataSpaceRoot->Rotate, [0,0,1], 20
> oTool->RefreshCurrentWindow
>
> But after hours=92 attempt, I still do not know how to export the image
> from the ivolume. Of course I can choose =93export=94 to file from the
> ivolume menu and then I have to do this hundreds of times to make a
> animation :(
> I found David had some similar explanations here:
> http://www.dfanning.com/itool_tips/newdata.html
> but it seems to me this will only work with ilmage=85
>
> I am not experienced at all with iTools Object Classes and any
> suggestions or clues would be greatly appreciated.

Somehow (I don't have the foggiest idea about how) you have
to get the ID of the draw widget the volume is displayed in.
From there you can get the window object:

```
Widget_Control, drawWidgetID, Get_Value=windowObject
```

Then, you can take a snapshot of the window as an image:

```
windowObject -> GetProperty, Image_Data=snapshot
```

From there, you can just write any kind of file you like:

```
Write_JPEG, 'frame_1.jpg', snapshot, TRUE=1
```

I guess the key would be figuring out how to get the draw widget ID.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: How to export programmatically a volume with IVOLUME to images
Posted by [Michael Galloy](#) on Tue, 20 May 2008 03:12:56 GMT

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yingjie, Peng wrote:

> Dear all,

>

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> oDataSpace = oTool->GetByIdentifier(idDataSpace)

> oDataSpace->GetProperty, PARENT=oDataSpaceRoot

> oDataSpaceRoot->Rotate, [0,0,1], 20

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> but it seems to me this will only work with ilimage

>

> I am not experienced at all with iTools Object Classes and any

> suggestions or clues would be greatly appreciated.

>

> with best regards,
> Yingjie

Just get the iTools window object and ask for its data:

```
IDL> f = filepath('head.dat', subdir=['examples', 'data'])
IDL> head = bytarr(80, 100, 57)
IDL> openr, lun, f, /get_lun
IDL> readu, lun, head
IDL> free_lun, lun
IDL> ivolume, head ; hit the "Render" button after it comes up
IDL> toolId = itgetcurrent(tool=tool)
IDL> win = tool->getByIdentifier('/tools/volume tool/window')
IDL> help, win
WIN      OBJREF   = <ObjHeapVar16322(IDLITGRWINSCE)>
IDL> win->getProperty, image_data=im
IDL> help, im
IM       BYTE     = Array[3, 824, 589]
IDL> window, xsize=824, ysize=589
IDL> tv, im, true=1
```

This could be made more robust by using findIdentifiers (like in you example) to get the ID since it won't always be '/tools/volume tool/window' (like if you have multiple iVolume tools open).

Mike

--

www.michaelgalloy.com
Tech-X Corporation
Software Developer II

Subject: Re: How to export programmatically a volume with IVOLUME to images
Posted by [Kenneth P. Bowman](#) on Tue, 20 May 2008 12:38:11 GMT
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In article

<d088ae51-68be-4983-b361-666923cef317@8g2000hse.googlegroups.com>,
"yingjie, Peng" <yingjiepeng@yahoo.com> wrote:

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> with best regards,
> Yingjie

You can download my IDL library (bowman_lib.zip) from here

<http://idl.tamu.edu/Downloads.html>

It contains routines to do what you want.

Ken Bowman

Subject: Re: How to export programmatically a volume with IVOLUME to images
Posted by [yingjie, Peng](#) on Tue, 20 May 2008 22:19:59 GMT
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Dear all,

Thanks so much for all the kind suggestions and solutions.
Especially,
I found Ken Bowman's library is really amazing. In the
iTools section, I see the procedure:

ITool_SPIN_MOVIE_KPB - spin an iTool view around an axis and save the
images to make a movie

exactly what I want to do! I would strongly recommend all IDL developers to have a look at these wonderful sources:

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Michael Galloy's IDL Resources: <http://michaelgalloy.com/>

Ken Bowman's IDL library: <http://idl.tamu.edu/Downloads.html>

Cheers,
Yingjie
