
Subject: Re: IVolume/isosurface
Posted by [Karl Schultz](#) on Thu, 06 Jul 2006 22:08:54 GMT
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On Thu, 06 Jul 2006 14:34:27 -0600, Kenneth P. Bowman wrote:

> Can an IVolume display more than one isosurface? If not, why not?
>
> Thanks, Ken Bowman

Sure it can.

Just do the

Operations->Volume->Isosurface

thing as many times as you like.

What is *probably* confusing you is that the Isosurface is, intentionally, selected after it is created. In this state, the Volume operations are disabled in the Operations menu because a volume is not selected.

You need to re-select the volume to add another Isosurface.

Sometimes it is tricky to get the mouse pointer on the volume and not the surface for some Isosurfaces. If you have trouble selecting the volume, try bringing up the Visualization browser and use the tree widget to select the volume.

Karl

Subject: Re: IVolume/isosurface
Posted by [Kenneth P. Bowman](#) on Thu, 06 Jul 2006 23:30:39 GMT
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In article <12ar2fms945fc42@corp.supernews.com>,
"Karl Schultz" <k_remove_schultz@ittvis.com> wrote:

>> Can an IVolume display more than one isosurface? If not, why not?
>>
>
> You need to re-select the volume to add another Isosurface.

OK, I can do that interactively, but I am trying to do this programmatically, as follows.

Being a novice object graphics user, I expect the code is ugly, but it works for a single isovalue. However, when isovalues is an array, only one

surface is displayed. Printing isosurface_id shows two isosurfaces, but the second does not appear in the display.

Confusedly (but what else is new),

Ken

```
IVOLUME, var, /NO_SAVEPROMPT, OVERPLOT = itool_id
```

```
vol_id = itool_obj -> FindIdentifiers('*DATA SPACE/VOLUME*', /VISUALIZATIONS)      ;Get
volume viz object identifier
vol_obj = itool_obj -> GetByIdentifier(vol_id)                                     ;Get volume viz object
reference
vol_obj -> SetProperty, RENDER_EXTENTS = 0                                       ;Turn off walls
vol_obj -> SetProperty, HIDE = 1                                                  ;Hide volume (for exporting
images)

isosurface_op_id = itool_obj -> FindIdentifiers('*ISOSURFACE*', /OPERATIONS)      ;Get
isosurface operator identifier
isosurface_op_obj = itool_obj -> GetByIdentifier(isosurface_op_id)                ;Get isosurface
operator object reference
isosurface_op_obj -> SetProperty, SHOW_EXECUTION_UI = 0                          ;Turn off
isosurface operator user interface
FOR i = 0, N_ELEMENTS(isovalues)-1 DO BEGIN
  isosurface_op_obj -> SetProperty, _ISOVALUE0 = isovalues[i]                    ;Set isosurface
value to pv_value
  rc = itool_obj -> DoAction(isosurface_op_id)                                   ;Make isosurface
ENDFOR

isosurface_id = itool_obj -> FindIdentifiers('*DATA SPACE/ISOSURFACE*', /VISUALIZATIONS)
;Get isosurface object identifier(s)
PRINT, isosurface_id
FOR i = 0, N_ELEMENTS(isovalues)-1 DO BEGIN
  isosurface_obj = itool_obj -> GetByIdentifier(isosurface_id[i])                ;Get isosurface
object reference
  isosurface_obj -> SetProperty, SOURCE_COLOR = 1, $                             ;Set color
source to "user"
  FILL_COLOR = isocolor, $                                                        ;Set color
  TRANSPARENCY = 20                                                                ;Set transparency
  itool_obj -> RefreshCurrentWindow                                                ;Refresh window
  iTPropertyReport, itool_obj, isosurface_id[i]                                  ;Print list of isosurface
properties
ENDFOR
```

Subject: Re: IVolume/isosurface
Posted by [Michael Galloy](#) on Fri, 07 Jul 2006 17:23:34 GMT

Kenneth P. Bowman wrote:

```
> In article <12ar2fms945fc42@corp.supernews.com>,
> "Karl Schultz" <k_remove_schultz@ittvis.com> wrote:
>
>>> Can an IVolume display more than one isosurface? If not, why not?
>>>
>> You need to re-select the volume to add another Isosurface.
>
```

Karl's suggestion will fix this programmatic example too. You just need to insert a

```
vol_obj->select
```

after creating an isosurface (and before creating the next isosurface). See the code below.

Mike

--

www.michaelgalloy.com

```
>
> IVOLUME, var, /NO_SAVEPROMPT, OVERPLOT = itool_id
>
> vol_id = itool_obj -> FindIdentifiers('*DATA SPACE/VOLUME*', /VISUALIZATIONS)
;Get volume viz object identifier
> vol_obj = itool_obj -> GetByIdentifier(vol_id) ;Get volume viz object
reference
> vol_obj -> SetProperty, RENDER_EXTENTS = 0 ;Turn off walls
> vol_obj -> SetProperty, HIDE = 1 ;Hide volume (for
exporting images)
>
> isosurface_op_id = itool_obj -> FindIdentifiers('*ISOSURFACE*', /OPERATIONS) ;Get
isosurface operator identifier
> isosurface_op_obj = itool_obj -> GetByIdentifier(isosurface_op_id) ;Get
isosurface operator object reference
> isosurface_op_obj -> SetProperty, SHOW_EXECUTION_UI = 0 ;Turn off
isosurface operator user interface
> FOR i = 0, N_ELEMENTS(isovalues)-1 DO BEGIN
>   isosurface_op_obj -> SetProperty, _ISOVALUE0 = isovalues[i] ;Set
isosurface value to pv_value
>   rc = itool_obj -> DoAction(isosurface_op_id)
;Make isosurface
```

```
vol_obj->select ; need to select volume again here
```

```
> ENDFOR
```

```

>
> isosurface_id = itool_obj -> FindIdentifiers('*DATA SPACE/ISOSURFACE*',
/VISUALIZATIONS) ;Get isosurface object identifier(s)
> PRINT, isosurface_id
> FOR i = 0, N_ELEMENTS(isovalues)-1 DO BEGIN
>   isosurface_obj = itool_obj -> GetByIdentifier(isosurface_id[i])           ;Get isosurface
object reference
>   isosurface_obj -> SetProperty, SOURCE_COLOR = 1, $                       ;Set color
source to "user"
>   FILL_COLOR = isocolor, $                                               ;Set color
>   TRANSPARENCY = 20                                                       ;Set transparency
>   itool_obj -> RefreshCurrentWindow                                       ;Refresh window
>   iTPropertyReport, itool_obj, isosurface_id[i]                         ;Print list of isosurface
properties
> ENDFOR

```

Subject: Re: IVolume/isosurface
 Posted by [Kenneth P. Bowman](#) on Fri, 07 Jul 2006 18:09:18 GMT
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In article <lc-dnWqhn7QrBTPZnZ2dnUVZ_s-dnZ2d@comcast.com>,
 Michael Galloy <mgalloy@gmail.com> wrote:

```

> Karl's suggestion will fix this programmatic example too. You just need
> to insert a
>
>   vol_obj->select
>
> after creating an isosurface (and before creating the next isosurface).
> See the code below.
>
> Mike

```

Ah ha! That was not obvious to me. (But being nearly superannuated*,
 it is not surprising that it is not obvious.)

Thanks, Ken

*superannuated - adj., cause to become obsolete through age or new
 technological or intellectual developments.
