ImageViewer

SOFA

March 23, 2012

Abstract

Responsible for displaying images in SOFA.

1 Requirements

SOFA Packages: The following must be enabled in sofa-local.prf

- Image Plugin

SOFA Plugins: The following must be loaded in your SOFA instance

- Image Plugin

2 Scene Settings

2.1 Required Settings

template
The defined template type must match the image pixel type. Image types are:

- **ImageC** (char)

- **ImageUC** (unsigned char)

- **ImageI** (int)

- **ImageUI** (unsigned int)

- **ImageS** (short)

- **ImageUS** (unsigned short)

- **ImageL** (long)

- **ImageUL** (unsigned long)

- **ImageF** (float)

- **ImageD** (double)

- **ImageB** (bool)

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Value Type - **Image type**
Default Value - ImageUC

2.2 Optional Settings

vectorvis
Defines the options for visualizing vector and tensor information in images.
The values are "subsampleXY subsampleZ scale rgb shape tensorOrder",
where:

- **subsampleXY** - an integer n such that a shape is displayed every n
  voxels in the X and Y planes.

- **subsampleZ** - an integer n such that a shape is displayed every n voxels
  in the Z plane.

- **scale** - an integer n such that each shape is displayed n times its original
  size.

- **rgb** - When true, a multichannel image is displayed as an RGB image.
  When false, a multichannel image is displayed in greyscale, where the
  value is the L2 norm of all the channels.

- **shape** - When true, vectors are displayed as arrows in 3 channel images,
  and tensors are displayed as ellipsoids in 6 channel images.

- **tensorOrder** - A string describing the order in which the 6 tensor
  values are given in the image. Currently supported:

  - **LowerTriRowMajor** - The lower part of the symmetric matrix is
    given in Row Major order.

  $$\begin{matrix} a & b & c \\ b & d & e \\ c & e & f \end{matrix}$$

  given as

  $$a \quad b \quad d \quad c \quad e \quad f$$

  - **UpperTriRowMajor** - The upper part of the symmetric matrix is
    given in Row Major order.

  $$\begin{matrix} a & b & c \\ b & d & e \\ c & e & f \end{matrix}$$

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given as

$$a \quad b \quad c \quad d \quad e \quad f$$

– **DiagonalFirst** - The values along the diagonal of the symmetric matrix are given first.

$$\begin{matrix} a & b & c \\ b & d & e \\ c & e & f \end{matrix}$$

given as

$$a \quad d \quad f \quad b \quad c \quad e$$

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Value Type - **[int,int,int,bool,bool,string]**
Default Value - [5,5,10,true,false,LowerTriRowMajor]

arrows
If true, an image that contains vector information will display the vectors using arrows.
Value Type - **bool**
Default Value - false

scale
The relative scale (size) of the arrows.
Value Type - **real**
Default Value - 11.75

histogramValues
Two values representing the minimum and maximum windowing (AKA clamping) values.
Value Type - **[real,real]**
Default Value - No windowing
Aliases - defaultHistogram, defaultHisto, histoValues

defaultSlices
Three values describing the x, y and z slices to be displayed initially
Value Type - **[int,int,int]**
Default Value - The middle slice in each plane

defaultRgb
If true, an image that contains vector information will be displayed as an RGB image.
Value Type - **bool**
Default Value - false

plane
Actually used as Data, the default slices to be displayed initially can also be

specified here.
Value Type - [**int,int,int**]
Default Value - The middle slice in each plane

3   Scene Data

3.1   Required Data

image
A link to the image in the ImageContainer component.
Value Type - **ImageTypes**
Aliases - outputImage

3.2   Optional Data

transform
A link to the transformation in the ImageContainer component.
Value Type - **TransformType**
Aliases - outputTransform

3.3   Examples

image/examples/loadimage.scn image/examples/loadHDR.scn