

nukak3d

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nukak3d Directory Hierarchy

nukak3d Directories

This directory hierarchy is sorted roughly, but not completely, alphabetically:nukak3d 2include 2

nukak3d Class Index

nukak3d Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

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| nkLevelSets (Class for Level Sets Segmentation) | 10 |
| nkLevelSetsPageGradient | 17 |
| nkLevelSetsPageSeeds | 19 |
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| nkMain (Nukak3d Application) | 24 |
| nkMenuTool (Menu of items) | 26 |
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nukak3d File Index

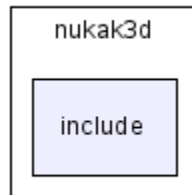
nukak3d File List

Here is a list of all files with brief descriptions:

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| nkLevelSets.h (Class for Level Sets segmentation wizard) | 63 |
| nkMain.h (Nukak3d Application) | 64 |
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| nkObj3DViewer.h (Class for view mesh) | 66 |
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nukak3d Directory Documentation

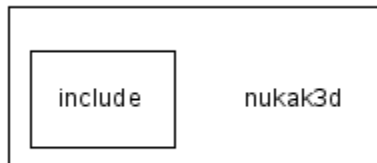
/home/apinzonf/src/nk/nukak3d/include/ Directory Reference



Files

- file **nkAcercaDe.h**
- file **nkInteractorStyleEndoCamera.h**
- file **nkIODialog.h**
- file **nkLevelSets.h**
- file **nkMain.h**
- file **nkNukak3D.h**
- file **nkObj3DViewer.h**
- file **nkToolBar.h**
- file **nkToolBarMac.h**
- file **nkVolViewer.h**

/home/apinzonf/src/nk/nukak3d/ Directory Reference



Directories

- directory **include**

nukak3d Class Documentation

nkAcercaDe Class Reference

About Dialog.

```
#include <nkAcercaDe.h>
```

Public Member Functions

- **nkAcercaDe** (wxWindow *parent)
 - **~nkAcercaDe** ()
-

Detailed Description

About Dialog.

Definition at line 29 of file nkAcercaDe.h.

Constructor & Destructor Documentation

nkAcercaDe (wxWindow * *parent*) [*inline*]

Class constructor.

Definition at line 35 of file nkAcercaDe.h. **~nkAcercaDe** () [*inline*]

Class destructor.

Definition at line 67 of file nkAcercaDe.h.

The documentation for this class was generated from the following file:

- **nkAcercaDe.h**

nkInteractorStyleEndoCamera Class Reference

```
#include <nkInteractorStyleEndoCamera.h>
```

Public Types

- typedef vtkInteractorStyle **Superclass**

Public Member Functions

- virtual const char * **GetClassName** ()
- virtual int **IsA** (const char *type)
- void **PrintSelf** (ostream &os, vtkIndent indent)
- virtual void **SetRestoreUpVector** (int)
- virtual int **GetRestoreUpVector** ()
- virtual void **RestoreUpVectorOn** ()
- virtual void **RestoreUpVectorOff** ()
- virtual double * **GetDefaultUpVector** ()
- virtual void **GetDefaultUpVector** (double data[3])
- virtual void **SetDefaultUpVector** (double data[])
- virtual void **OnMouseMove** ()
- virtual void **OnLeftButtonDown** ()
- virtual void **OnLeftButtonUp** ()
- virtual void **OnMiddleButtonDown** ()
- virtual void **OnMiddleButtonUp** ()
- virtual void **OnRightButtonDown** ()
- virtual void **OnRightButtonUp** ()
- virtual void **OnMouseWheelForward** ()
- virtual void **OnMouseWheelBackward** ()
- virtual void **RotateEndo** ()
- virtual void **Rotate** ()
- virtual void **Spin** ()
- virtual void **Pan** ()
- virtual void **Dolly** ()

Static Public Member Functions

- static nkInteractorStyleEndoCamera * **New** ()
- static int **IsTypeOf** (const char *type)
- static nkInteractorStyleEndoCamera * **SafeDownCast** (vtkObject *o)

Protected Member Functions

- **nkInteractorStyleEndoCamera** ()
- **~nkInteractorStyleEndoCamera** ()
- virtual void **Dolly** (double factor)
- virtual void **MotionAlongVector** (double vector[3], double amount, vtkCamera *cam)
- virtual void **FinishCamera** (vtkCamera *cam)
- void **StartRotEndo** ()
- void **EndRotEndo** ()

Protected Attributes

- double **MotionFactor**
- int **RestoreUpVector**

- double **DefaultUpVector** [3]
-

Detailed Description

Definition at line 28 of file nkInteractorStyleEndoCamera.h.

Member Typedef Documentation

typedef vtkInteractorStyle Superclass

Definition at line 32 of file nkInteractorStyleEndoCamera.h.

Constructor & Destructor Documentation

nkInteractorStyleEndoCamera () [`protected`]

~nkInteractorStyleEndoCamera () [`protected`]

Member Function Documentation

static nkInteractorStyleEndoCamera* New () [static]

virtual const char* GetClassName () [virtual]

static int IsTypeOf (const char * *type*) [static]

virtual int IsA (const char * *type*) [virtual]

static nkInteractorStyleEndoCamera* SafeDownCast (vtkObject * *o*) [static]

void PrintSelf (ostream & *os*, vtkIndent *indent*)

virtual void SetRestoreUpVector (int) [virtual]

virtual int GetRestoreUpVector () [virtual]

virtual void RestoreUpVectorOn () [virtual]

virtual void RestoreUpVectorOff () [virtual]

virtual double* GetDefaultUpVector () [virtual]

virtual void GetDefaultUpVector (double *data*[3]) [virtual]

virtual void SetDefaultUpVector (double *data*[]) [virtual]

virtual void OnMouseMove () [virtual]

virtual void OnLeftButtonDown () [virtual]

virtual void OnLeftButtonUp () [virtual]

virtual void OnMiddleButtonDown () [virtual]

virtual void OnMiddleButtonUp () [virtual]

virtual void OnRightButtonDown () [virtual]

virtual void OnRightButtonUp () [virtual]

virtual void OnMouseWheelForward () [virtual]

virtual void OnMouseWheelBackward () [virtual]

virtual void RotateEndo () [virtual]

virtual void Rotate () [virtual]

virtual void Spin () [virtual]

virtual void Pan () [virtual]

virtual void Dolly () [virtual]

virtual void Dolly (double *factor*) [protected, virtual]

virtual void MotionAlongVector (double *vector*[3], double *amount*, vtkCamera * *cam*)
[protected, virtual]

virtual void FinishCamera (vtkCamera * *cam*) [protected, virtual]

void StartRotEndo () [protected]

void EndRotEndo () [protected]

Member Data Documentation

double MotionFactor [protected]

Definition at line 71 of file nkInteractorStyleEndoCamera.h.int RestoreUpVector
[protected]

Definition at line 72 of file nkInteractorStyleEndoCamera.h.double DefaultUpVector[3]
[protected]

Definition at line 73 of file nkInteractorStyleEndoCamera.h.

The documentation for this class was generated from the following file:

- **nkInteractorStyleEndoCamera.h**

nkIODialog Class Reference

Generic dialog for input data.

```
#include <nkIODialog.h>
```

Public Member Functions

- **nkIODialog** (wxWindow *parent, wxString unasEtiquetas[100], int un_tamano, wxWindowID id=wxID_ANY, const wxString &title="nukak3D", const wxPoint &pos=wxDefaultPosition, const wxSize &size=wxDefaultSize, long style=wxDEFAULT_DIALOG_STYLE, const wxString &name="nkIODialog")
- **nkIODialog** (wxWindow *parent, wxString p_text, wxWindowID id=wxID_ANY, const wxString &title="Nukak3D", const wxPoint &pos=wxDefaultPosition, const wxSize &size=wxDefaultSize, long style=wxDEFAULT_DIALOG_STYLE, const wxString &name="nkIODialog")
- **~nkIODialog** ()
- void **cambiarValor** (wxString un_valor, int un_indice)
- wxString **obtenerValor** (int un_indice)

Detailed Description

Generic dialog for input data.

Definition at line 26 of file nkIODialog.h.

Constructor & Destructor Documentation

nkIODialog (wxWindow * *parent*, wxString *unasEtiquetas*[100], int *un_tamano*, wxWindowID *id* = wxID_ANY, const wxString & *title* = "nukak3D", const wxPoint & *pos* = wxDefaultPosition, const wxSize & *size* = wxDefaultSize, long *style* = wxDEFAULT_DIALOG_STYLE, const wxString & *name* = "nkIODialog")

Class constructor for input dialog.

Parameters:

parent wxWindow Owner.
unasEtiquetas array of wxString labels for controls,
un_tamano numbers of controls.
title Title window.
pos Window position.
size Window size.
style Window style.
name Object name.

nkIODialog (wxWindow * parent, wxString p_text, wxWindowID id = wxID_ANY, const wxString & title = "Nukak3D", const wxPoint & pos = wxDefaultPosition, const wxSize & size = wxDefaultSize, long style = wxDEFAULT_DIALOG_STYLE, const wxString & name = "nkIODialog")

Class constructor for output dialog.

Parameters:

parent wxWindow Owner.

p_text Information text.

title Title Window.

pos Window position.

size Window Size.

style Window style.

name Object name.

~nkIODialog ()

Class destructor.

Member Function Documentation

void cambiarValor (wxString un_valor, int un_indice)

Set initial value of the input control.

Parameters:

un_valor set value.

un_indice index of control to modified in 0 to numbers of controls -1.

wxString obtenerValor (int un_indice)

Get value of control.

Parameters:

un_indice index of control to get in 0 to numbers of controls -1.

The documentation for this class was generated from the following file:

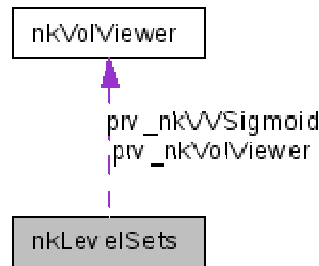
- **nkIODialog.h**

nkLevelSets Class Reference

Class for Level Sets Segmentation.

```
#include <nkLevelSets.h>
```

Collaboration diagram for nkLevelSets:



Public Types

- typedef unsigned short **PixelTypeUShort**
- typedef float **PixelTypeFloat**
- typedef itk::Image< **PixelTypeUShort**, 3 > **ImageUShort3**
- typedef itk::Image< **PixelTypeFloat**, 3 > **ImageFloat3**
- typedef itk::RescaleIntensityImageFilter< **ImageFloat3**, **ImageUShort3** > **CastFilterOutType**
- typedef itk::ShapeDetectionLevelSetImageFilter< **ImageFloat3**, **ImageFloat3**, **PixelTypeFloat** > **ShapeDetectionFilterType**
- typedef itk::BinaryThresholdImageFilter< **ImageFloat3**, **ImageFloat3** > **ThresholdingFilterType**
- typedef itk::CastImageFilter< **ImageUShort3**, **ImageFloat3** > **CastFilterInType**
- typedef itk::GradientMagnitudeRecursiveGaussianImageFilter< **ImageFloat3**, **ImageFloat3** > **GradientFilterType**
- typedef itk::SigmoidImageFilter< **ImageFloat3**, **ImageFloat3** > **SigmoidFilterType**
- typedef itk::FastMarchingImageFilter< **ImageFloat3**, **ImageFloat3** > **FastMarchingFilterType**
- typedef itk::ImageFileWriter< **ImageUShort3** > **WriterType**
- typedef itk::ImageToVTKImageFilter< **ImageUShort3** > **ITKToVTKType**
- typedef itk::SimpleMemberCommand< **nkLevelSets** > **SimpleCommandType**

Public Member Functions

- **nkLevelSets** (**nkVolViewer** *un_volViewer, wxAuiNotebook *p_libro)
- void **Configurar** ()
- bool **ConfigurarLevelSet** ()
- bool **ObtenerDatosLevelSet** ()
- void **SetInput** (itk::Image< unsigned short, 3 >::Pointer una_imagen)
- void **UpdateLevelSets** ()
- void **UpdateGradient** (itk::NumericTraits< float >::RealType un_sigma)
- void **UpdateSigmoid** (double un_alpha, double un_beta)
- itk::Image< unsigned short, 3 >::Pointer **GetInput** ()
- itk::Image< unsigned short, 3 >::Pointer **GetOutput** ()
- itk::Image< float, 3 >::Pointer **GetOutputSigmoid** ()
- itk::Image< float, 3 >::Pointer **GetOutputGradient** ()
- void **CrearAsistente** ()
- void **WriteGradientImage** ()

- void **ActualizarSegmentacionLevelSet** ()
- void **SetUpUpdateOverlappingImage** (vtkImageData *una_vtkImage, double una_opacidad, int un_dataSet)
- void **AddOverlappingImage** (vtkImageData *una_vtkImage, double una_opacidad, int un_dataSet)

Public Attributes

- SimpleCommandType::Pointer **prv_iterationCommand**
- CastFilterOutType::Pointer **prv_castOutLevelSet**
- ShapeDetectionFilterType::Pointer **prv_shapeDetectionLevelSet**
- ThresholdingFilterType::Pointer **prv_thresholder**
- CastFilterInType::Pointer **prv_castUnShortToFloat**
- CastFilterOutType::Pointer **prv_castOutLevelSetVelocity**
- GradientFilterType::Pointer **prv_gradientMagnitude**
- SigmoidFilterType::Pointer **prv_sigmoid**
- FastMarchingFilterType::Pointer **prv_fastMarching**
- ITKToVTKType::Pointer **prv_vtkToItk**
- vtkIsosurfaceManager * **prv_isoSurfaceManager**
- std::list< std::vector< int > > **pub_listSeeds**

Detailed Description

Class for Level Sets Segmentation.

Definition at line 52 of file nkLevelSets.h.

Member Typedef Documentation

typedef unsigned short PixelTypeUShort

Definition at line 136 of file nkLevelSets.h.typedef float PixelTypeFloat

Pixel data type unsigned short.

Definition at line 137 of file nkLevelSets.h.typedef itk::Image<PixelTypeUShort,3> ImageUShort3

Pixel data type float.

Definition at line 139 of file nkLevelSets.h.typedef itk::Image<PixelTypeFloat ,3> ImageFloat3

Image 3D of unsigned short.

Definition at line 140 of file nkLevelSets.h.typedef
itk::RescaleIntensityImageFilter<ImageFloat3,ImageUShort3> CastFilterOutType
Image 3D of float.

Definition at line 142 of file nkLevelSets.h.typedef
itk::ShapeDetectionLevelSetImageFilter< ImageFloat3,ImageFloat3,PixelTypeFloat>
ShapeDetectionFilterType

Definition at line 143 of file nkLevelSets.h.typedef **itk::BinaryThresholdImageFilter<**
ImageFloat3, ImageFloat3 > ThresholdingFilterType

Definition at line 144 of file nkLevelSets.h.typedef **itk::CastImageFilter<**
ImageUShort3,ImageFloat3 > CastFilterInType

Definition at line 145 of file nkLevelSets.h.typedef
itk::GradientMagnitudeRecursiveGaussianImageFilter< ImageFloat3, ImageFloat3 >
GradientFilterType

Definition at line 146 of file nkLevelSets.h.typedef **itk::SigmoidImageFilter< ImageFloat3,**
ImageFloat3 > SigmoidFilterType

Definition at line 147 of file nkLevelSets.h.typedef **itk::FastMarchingImageFilter<**
ImageFloat3, ImageFloat3 > FastMarchingFilterType

Definition at line 148 of file nkLevelSets.h.typedef **itk::ImageFileWriter< ImageUShort3 >**
WriterType

Definition at line 149 of file nkLevelSets.h.typedef
itk::ImageToVTKImageFilter<ImageUShort3> ITKToVTKType

Definition at line 150 of file nkLevelSets.h.typedef **itk::SimpleMemberCommand<**
nkLevelSets > SimpleCommandType

Definition at line 152 of file nkLevelSets.h.

Constructor & Destructor Documentation

nkLevelSets (nkVolViewer * *un_volViewer*, wxAuiNotebook * *p_libro*)

Class Constructor.

Member Function Documentation

void Configurar ()

Configure preprocessing image for Level Sets.

bool ConfigurarLevelSet ()

Configure params for Level Sets.

bool ObtenerDatosLevelSet ()

Get propagation scaling, curvature scaling, number of iterations of input dialog.

void SetInput (itk::Image< unsigned short, 3 >::Pointer *una_imagen*)

Image to segmentation.

void UpdateLevelSets ()

run Update of shape Detection Level Set filter, and show progress dialog.

void UpdateGradient (itk::NumericTraits< float >::RealType *un_sigma*)

run Update of Gradient filter.

Parameters:

un_sigma Sigma for Gradient filter.

void UpdateSigmoid (double *un_alpha*, double *un_beta*)

run Update of Sigmoid filter.

Parameters:

un_alpha Alpha for sigmoid filter

un_beta Beta for sigmoid filter

itk::Image<unsigned short,3>::Pointer GetInput ()

Get original image.

Returns:

pointer to input image.

itk::Image<unsigned short,3>::Pointer GetOutput ()

Get segmented result.

Returns:

pointer to segmented image.

itk::Image<float, 3>::Pointer GetOutputSigmoid ()

Get result of Sigmoid filter.

Returns:

pointer to image.

itk::Image<float, 3>::Pointer GetOutputGradient ()

Get result of Gradient filter.

Returns:

pointer to image.

void CrearAsistente ()

Make, configure, and run Wizard.

void WriteGradientImage ()

Make new page in Notebook, with the segmentating image.

void ActualizarSegmentacionLevelSet ()

Function to update mesh 3d in view, for each iteration of filter.

void SetUpdateOverlappingImage (vtkImageData * *una_vtkImage*, double *una_opacidad*, int *un_dataSet*)

Remove mesh if exist, and add new isosurface, generated from input image.

Parameters:

una_vtkImage Image for make isosurface.
una_opacidad Alpha channel for Blending image original with this.
un_dataSet Id of image.

void AddOverlappingImage (vtkImageData * *una_vtkImage*, double *una_opacidad*, int *un_dataSet*)

Equal to ActualizarSegmentacionLevelSet, but in the end process.

Parameters:

una_vtkImage Image for make isosurface.
una_opacidad Alpha channel for Blending image original with this.
un_dataSet Id of image.

Member Data Documentation

SimpleCommandType::Pointer prv_iterationCommand

Definition at line 153 of file nkLevelSets.h.CastFilterOutType::Pointer prv_castOutLevelSet

Definition at line 155 of file nkLevelSets.h.ShapeDetectionFilterType::Pointer prv_shapeDetectionLevelSet

Definition at line 156 of file nkLevelSets.h.ThresholdingFilterType::Pointer prv_thresholder

Definition at line 157 of file nkLevelSets.h.CastFilterInType::Pointer prv_castUnShortToFloat

Definition at line 158 of file nkLevelSets.h.CastFilterOutType::Pointer prv_castOutLevelSetVelocity

Definition at line 159 of file nkLevelSets.h.GradientFilterType::Pointer prv_gradientMagnitude

Definition at line 160 of file nkLevelSets.h.SigmoidFilterType::Pointer prv_sigmoid

Definition at line 161 of file nkLevelSets.h.FastMarchingFilterType::Pointer prv_fastMarching

Definition at line 162 of file nkLevelSets.h.ITKToVTKType::Pointer prv_vtkTolk

Definition at line 163 of file nkLevelSets.h.vtkIsosurfaceManager* prv_isoSurfaceManager

Definition at line 165 of file nkLevelSets.h.std::list<std::vector<int> > pub_listSeeds

Definition at line 166 of file nkLevelSets.h.

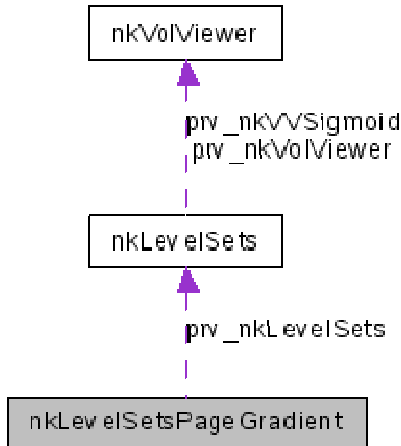
The documentation for this class was generated from the following file:

- **nkLevelSets.h**

nkLevelSetsPageGradient Class Reference

```
#include <nkLevelSets.h>
```

Collaboration diagram for nkLevelSetsPageGradient:



Public Types

- enum { **ID_EVENTO_SLIDER** = wxID_HIGHEST + 2000 }

Public Member Functions

- nkLevelSetsPageGradient** (wxWizard *parent=NULL, wxWizardPage *prev=NULL, wxWizardPage *next=NULL, const wxBitmap &bitmap=wxNullBitmap, **nkLevelSets** *un_nkLevelSets=NULL)
- ~nkLevelSetsPageGradient** ()

Public Attributes

- vtkViewImage2DWithTracer * **prv_vistaOriginal**
- vtkViewImage2DWithTracer * **prv_vistaModificada**
- wxVTKRenderWindowInteractor * **prv_wxVtkVistaOriginal**
- wxVTKRenderWindowInteractor * **prv_wxVtkVistaModificada**

Detailed Description

Definition at line 192 of file nkLevelSets.h.

Member Enumeration Documentation

anonymous enum

Enumerator:

ID_EVENTO_SLIDER

Definition at line 194 of file nkLevelSets.h.

Constructor & Destructor Documentation

nkLevelSetsPageGradient (**wxWizard** * *parent* = NULL, **wxWizardPage** * *prev* = NULL, **wxWizardPage** * *next* = NULL, **const wxBitmap** & *bitmap* = wxNullBitmap, **nkLevelSets** * *un_nkLevelSets* = NULL)

~nkLevelSetsPageGradient ()

Member Data Documentation

vtkViewImage2DWithTracer* *priv_vistaOriginal*

Definition at line 203 of file nkLevelSets.h.vtkViewImage2DWithTracer*
priv_vistaModificada

Definition at line 204 of file nkLevelSets.h.wxVTKRenderWindowInteractor*
priv_wxVtkVistaOriginal

Definition at line 205 of file nkLevelSets.h.wxVTKRenderWindowInteractor*
priv_wxVtkVistaModificada

Definition at line 206 of file nkLevelSets.h.

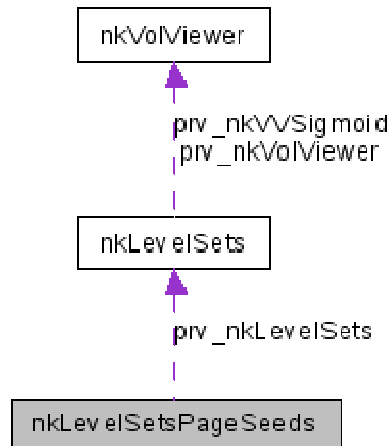
The documentation for this class was generated from the following file:

- **nkLevelSets.h**

nkLevelSetsPageSeeds Class Reference

```
#include <nkLevelSets.h>
```

Collaboration diagram for nkLevelSetsPageSeeds:



Public Types

- enum { **ID_EVENTO_BUTTON_SEEDS_ADD** = wxID_HIGHEST + 2200, **ID_EVENTO_BUTTON_SEEDS_DELETE**, **ID_EVENTO_BUTTON_SEEDS_RADIUS** }

Public Member Functions

- nkLevelSetsPageSeeds** (wxWizard *parent=NULL, wxWizardPage *prev=NULL, wxWizardPage *next=NULL, const wxBitmap &bitmap=wxNullBitmap, **nkLevelSets** *un_nkLevelSets=NULL)
- ~nkLevelSetsPageSeeds** ()
- void **Configurar** ()

Public Attributes

- vtkViewImage2DWithTracer * **prv_vistaAxial**
- vtkViewImage2DWithTracer * **prv_vistaCoronal**
- vtkViewImage2DWithTracer * **prv_vistaSagital**
- wxVTKRenderWindowInteractor * **prv_wxVtkVistaAxial**
- wxVTKRenderWindowInteractor * **prv_wxVtkVistaCoronal**
- wxVTKRenderWindowInteractor * **prv_wxVtkVistaSagital**

Detailed Description

Definition at line 246 of file nkLevelSets.h.

Member Enumeration Documentation

anonymous enum

Enumerator:

ID_EVENTO_BUTTON_SEEDS_ADD
ID_EVENTO_BUTTON_SEEDS_DELETE
ID_EVENTO_BUTTON_SEEDS_RADIUS

Definition at line 248 of file nkLevelSets.h.

Constructor & Destructor Documentation

nkLevelSetsPageSeeds (wxWizard * *parent* = NULL, wxWizardPage * *prev* = NULL, wxWizardPage * *next* = NULL, const wxBitmap & *bitmap* = wxNullBitmap, nkLevelSets * *un_nkLevelSets* = NULL)

~nkLevelSetsPageSeeds ()

Member Function Documentation

void Configurar ()

Member Data Documentation

vtkViewImage2DWithTracer* *prv_vistaAxial*

Definition at line 260 of file nkLevelSets.h.vtkViewImage2DWithTracer* *prv_vistaCoronal*

Definition at line 261 of file nkLevelSets.h.vtkViewImage2DWithTracer* *prv_vistaSagital*

Definition at line 262 of file nkLevelSets.h.wxVTKRenderWindowInteractor* *prv_wxVtkVistaAxial*

Definition at line 263 of file nkLevelSets.h.wxVTKRenderWindowInteractor* *prv_wxVtkVistaCoronal*

Definition at line 264 of file nkLevelSets.h.wxVTKRenderWindowInteractor* *prv_wxVtkVistaSagital*

Definition at line 265 of file nkLevelSets.h.

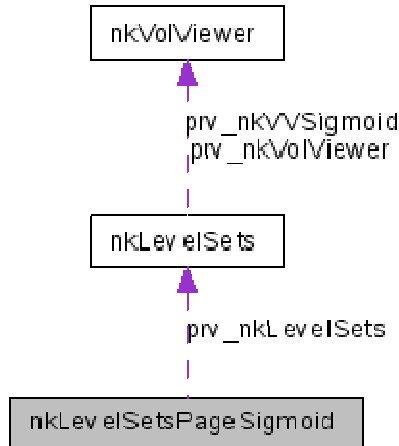
The documentation for this class was generated from the following file:

- **nkLevelSets.h**

nkLevelSetsPageSigmoid Class Reference

```
#include <nkLevelSets.h>
```

Collaboration diagram for nkLevelSetsPageSigmoid:



Public Types

- enum { **ID_EVENTO_SLIDER_SIGMOID_ALPHA** = wxID_HIGHEST + 2100, **ID_EVENTO_SLIDER_SIGMOID_BETA** }

Public Member Functions

- nkLevelSetsPageSigmoid** (wxWizard *parent=NULL, wxWizardPage *prev=NULL, wxWizardPage *next=NULL, const wxBitmap &bitmap=wxNullBitmap, **nkLevelSets** *un_nkLevelSets=NULL)
- ~nkLevelSetsPageSigmoid** ()

Public Attributes

- vtkViewImage2DWithTracer * **prv_vistaOriginal**
- vtkViewImage2DWithTracer * **prv_vistaModificada**
- wxVTKRenderWindowInteractor * **prv_wxVtkVistaOriginal**
- wxVTKRenderWindowInteractor * **prv_wxVtkVistaModificada**

Detailed Description

Definition at line 217 of file nkLevelSets.h.

Member Enumeration Documentation

anonymous enum

Enumerator:

ID_EVENTO_SLIDER_SIGMOID_ALPHA
ID_EVENTO_SLIDER_SIGMOID_BETA

Definition at line 219 of file nkLevelSets.h.

Constructor & Destructor Documentation

nkLevelSetsPageSigmoid (*wxWizard* * *parent* = NULL, *wxWizardPage* * *prev* = NULL, *wxWizardPage* * *next* = NULL, *const wxBitmap* & *bitmap* = wxNullBitmap, *nkLevelSets* * *un_nkLevelSets* = NULL)

~nkLevelSetsPageSigmoid ()

Member Data Documentation

vtkViewImage2DWithTracer* *prv_vistaOriginal*

Definition at line 229 of file nkLevelSets.h.vtkViewImage2DWithTracer*
prv_vistaModificada

Definition at line 230 of file nkLevelSets.h.wxVTKRenderWindowInteractor*
prv_wxVtkVistaOriginal

Definition at line 231 of file nkLevelSets.h.wxVTKRenderWindowInteractor*
prv_wxVtkVistaModificada

Definition at line 232 of file nkLevelSets.h.

The documentation for this class was generated from the following file:

- **nkLevelSets.h**

nkMain Class Reference

nukak3d Application.

```
#include <nkMain.h>
```

Public Member Functions

- virtual bool **OnInit** (void)
- virtual int **OnExit** ()

Protected Attributes

- wxLocale **mi_locale**
-

Detailed Description

nukak3d Application.

Definition at line 29 of file nkMain.h.

Member Function Documentation

virtual bool OnInit (void) [virtual]

Init method of application.

Returns:

bool

virtual int OnExit () [virtual]

Exit method of application, for delete wxConfigBase::Set().

Returns:

int

Member Data Documentation

wxLocale mi_locale [protected]

Definition at line 43 of file nkMain.h.

The documentation for this class was generated from the following file:

- **nkMain.h**

nkMenuTool Class Reference

Menu of items.

```
#include <nkToolBar.h>
```

Public Types

- enum { **ID_CLICKMENU** = wxID_HIGHEST + 1000 }

Public Member Functions

- **nkMenuTool** (wxWindow *parent, wxWindowID id, const wxString &nombreMenu="Menu", const wxPoint &pos=wxDefaultPosition, const wxSize &size=wxDefaultSize, long style=wxNO_BORDER)
- **~nkMenuTool** ()
- void **crearMenu** (void)
- void **insertarTool** (nkTool *un_tool)
- nkTool * **obtenerTool** (size_t un_indice)
- size_t **longitudLista** (void)
- wxSize **obtenerTamano** (void)
- bool **estaDeplegado** (void)
- void **desplegarMenu** (void)
- void **replegarMenu** (void)
- void **repintar** (void)
- void **evtClick** (wxCommandEvent &WXUNUSED(evt))
- void **evtRedimensionar** (wxSizeEvent &WXUNUSED(evt))
- void **evtRepintar** (wxPaintEvent &WXUNUSED(evt))
- **nkMenuTool** (wxWindow *parent, wxWindowID id, const wxString &nombreMenu="Menu", const wxPoint &pos=wxDefaultPosition, const wxSize &size=wxDefaultSize, long style=wxNO_BORDER)
- **~nkMenuTool** ()
- void **insertarTool** (nkTool *un_tool)
- bool **estaDeplegado** (void)
- void **desplegarMenu** (void)
- void **replegarMenu** (void)

Public Attributes

- wxTreeCtrl * **prv_Arbol**
- wxTreeItemId **prv_TreeItemId**

Static Public Attributes

- static int **ANCHO_TOOLBAR**

Detailed Description

Menu of items.

Class for creation menu in Toolbar.

Definition at line 73 of file nkToolBar.h.

Member Enumeration Documentation

anonymous enum

Id for mouse event in this menu.

Enumerator:

ID_CLICKMENU

Definition at line 78 of file nkToolBar.h.

Constructor & Destructor Documentation

nkMenuTool (wxWindow * parent, wxWindowID id, const wxString & nombreMenu = "Menu", const wxPoint & pos = wxDefaultPosition, const wxSize & size = wxDefaultSize, long style = wxNO_BORDER)

Class constructor.

~nkMenuTool ()

Class destructor.

Delete list.

nkMenuTool (wxWindow * parent, wxWindowID id, const wxString & nombreMenu = "Menu", const wxPoint & pos = wxDefaultPosition, const wxSize & size = wxDefaultSize, long style = wxNO_BORDER)

Class constructor.

~nkMenuTool ()

Class destructor.

Delete list.

Member Function Documentation

void crearMenu (void)

Make menu.

void insertarTool (nkTool * *un_tool*)

Insert item in menu.

nkTool* obtenerTool (size_t *un_indice*)

get **nkTool** of list.

Parameters:

un_indice Position of **nkTool** in list.

size_t longitudLista (void)

Return list len.

wxSize obtenerTamano (void)

Return actual size of Menu.

bool estaDeplegado (void)

Is display menu.

void desplegarMenu (void)

Function for dropdown menu.

void replegarMenu (void)

Function for hide tools in menu.

void repintar (void)

Function for paint content of wxPanel.

Function for paint items in menu.

void evtClick (wxCommandEvent & *WXUNUSED*(evt))

Function for dropdown menu or hide items in this menu.

void evtRedimensionar (wxSizeEvent & *WXUNUSED*(evt))

Call Refresh() function of wxPanel.

void evtRepintar (wxPaintEvent & *WXUNUSED*(evt))

Function for event EVT_PAINT.

void insertarTool (nkTool * *un_tool*)

Insert item in menu.

bool estaDeplegado (void)

Is display menu.

void desplegarMenu (void)

Function for dropdown menu.

void replegarMenu (void)

Function for hide tools in menu.

Member Data Documentation

static int ANCHO_TOOLBAR [*static*]

Widht of menu

Definition at line 97 of file nkToolBar.h.wxTreeCtrl* prv_Arbol

Definition at line 106 of file nkToolBarMac.h.wxTreetemId prv_TreetemId

Definition at line 107 of file nkToolBarMac.h.

The documentation for this class was generated from the following files:

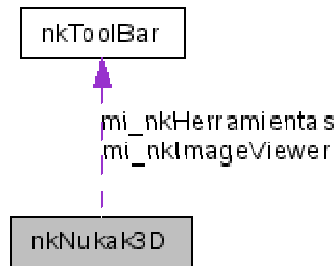
- **nkToolBar.h**
- **nkToolBarMac.h**

nkNukak3D Class Reference

Main window.

```
#include <nkNukak3D.h>
```

Collaboration diagram for nkNukak3D:



Public Types

- enum { `ID_ABRIR_ARCHIVO = wxID_HIGHEST + 1500`, `ID_ABRIR_ARCHIVO_DICOM`, `ID_ABRIR_ARCHIVO_MALLA3D`, `ID_ABRIR_ARCHIVO_VOL`, `ID_ACERCA_DE`, `ID_ACERCA_DE_MAC`, `ID_ARBOL`, `ID_AREA`, `ID_BOUNDINGBOX`, `ID_BOXWIDGET`, `ID_CAMERAPOS`, `ID_CAMPLANES`, `ID_CERRAR`, `ID_CERRAR_TODO`, `ID_COLDET`, `ID_ENDOCAMOB`, `ID_ENDOCAM`, `ID_FILPOLYDECIMATE`, `ID_FILPOLYDEFORM`, `ID_FILPOLYNORMALS`, `ID_FILPOLYSMOOTH`, `ID_FILPOLYTRIANGLE`, `ID_FILVOLGAUSSIAN`, `ID_FILVOLGRADIENT`, `ID_FILVOLMEDIAN`, `ID_FILVOLTHRESHOLD`, `ID_GUARDARMALLA3D`, `ID_GUARDARVOL`, `ID_JOYSTICK`, `ID_LSLEVELSETSCOMPLETO`, `ID_MARCHING_CUBES`, `ID_NAVENDOSCOPE`, `ID_NAVFLIGHT`, `ID_NAVJOYSTICK`, `ID_NAVRESET`, `ID_NAVTRACKBALL`, `ID_NAVUNICAM`, `ID_PALETA_COLOR`, `ID_PARIMAGE`, `ID_PARPOLYGON`, `ID_PARVIDEO`, `ID_REINICIAR_PALETA`, `ID_SALIR`, `ID_SETLANGUAGE`, `ID_SNAPSHOT3D`, `ID_SNAPSHOTAXIAL`, `ID_SNAPSHOTCORONAL`, `ID_SNAPSHOTSAGITAL`, `ID_STACTIVO`, `ID_STAUMENTAR`, `ID_STDISMINUIR`, `ID_STPASIVO`, `ID_VOLVIEWER_RENDERING_ESCALAR`, `ID_VOLVIEWER_RENDERING_MRC_MIP`, `ID_VOLVIEWER_RENDERING_MRC_COMP`, `ID_VOLVIEWER_RENDERING_MRC_ISO`, `ID_VOLVIEWER_RENDERING_TEXTURA`, `ID_FPS`, `ID_ULTIMO = wxID_HIGHEST+3000` }

Public Member Functions

- `nkNukak3D` (`wxWindow *parent`, `int id=-1`, `const wxString &title="Nukak3D"`, `const wxPoint &pos=wxDefaultPosition`, `const wxSize &size=wxDefaultSize`, `long style=wxDEFAULT_FRAME_STYLE`)
- `~nkNukak3D` ()
- void `insertarToolBar` (`wxWindow *window`, `wxString un_nombre`, `wxString una_etiqueta`)
- void `eventoAbrirVolumen` (`wxCommandEvent &WXUNUSED(event)`)
- void `eventoAbrirVolumenDicom` (`wxCommandEvent &WXUNUSED(event)`)
- void `eventoAbrirMalla3D` (`wxCommandEvent &WXUNUSED(event)`)
- void `eventoAcercaDe` (`wxCommandEvent &WXUNUSED(event)`)
- void `eventoAcercaDeMAC` (`wxCommandEvent &WXUNUSED(event)`)
- void `eventoArbol` (`wxTreeEvent &event`)
- void `eventoGuardarVol` (`wxCommandEvent &WXUNUSED(event)`)

- void **eventoGuardarMalla3D** (wxCommandEvent &WXUNUSED(event))
- void **eventoBoundingBox** (wxCommandEvent &WXUNUSED(event))
- void **eventoBoxWidget** (wxCommandEvent &WXUNUSED(event))
- void **eventoPaletaColor** (wxCommandEvent &event)
- void **eventoReiniciarPaleta** (wxCommandEvent &WXUNUSED(event))
- void **eventoSalir** (wxCommandEvent &WXUNUSED(event))
- void **eventoVolViewerRenderingEscalar** (wxCommandEvent &WXUNUSED(event))
- void **eventoVolViewerRenderingTextura** (wxCommandEvent &WXUNUSED(event))
- void **eventoVolViewerRenderingMRCmip** (wxCommandEvent &WXUNUSED(event))
- void **eventoVolViewerRenderingMRCcomp** (wxCommandEvent &WXUNUSED(event))
- void **eventoVolViewerRenderingMRCiso** (wxCommandEvent &WXUNUSED(event))
- void **eventoMarchingCubes** (wxCommandEvent &WXUNUSED(event))
- void **eventolsLevelsetsCompleto** (wxCommandEvent &WXUNUSED(event))
- void **eventoArea** (wxCommandEvent &WXUNUSED(event))
- void **eventoNavResetCamara** (wxCommandEvent &WXUNUSED(event))
- void **eventoNavTrackball** (wxCommandEvent &WXUNUSED(event))
- void **eventoNavJoystick** (wxCommandEvent &WXUNUSED(event))
- void **eventoNavFlight** (wxCommandEvent &WXUNUSED(event))
- void **eventoNavUnicam** (wxCommandEvent &WXUNUSED(event))
- void **eventoStActivo** (wxCommandEvent &WXUNUSED(event))
- void **eventoStPasivo** (wxCommandEvent &WXUNUSED(event))
- void **eventoStAumentar** (wxCommandEvent &WXUNUSED(event))
- void **eventoStDisminuir** (wxCommandEvent &WXUNUSED(event))
- void **eventoFilVolGaussian** (wxCommandEvent &WXUNUSED(event))
- void **eventoFilVolMedian** (wxCommandEvent &WXUNUSED(event))
- void **eventoFilVolGradient** (wxCommandEvent &WXUNUSED(event))
- void **eventoFilVolThreshold** (wxCommandEvent &WXUNUSED(event))
- void **eventoFilPolyTriangle** (wxCommandEvent &WXUNUSED(event))
- void **eventoFilPolyDecimate** (wxCommandEvent &WXUNUSED(event))
- void **eventoFilPolySmooth** (wxCommandEvent &WXUNUSED(event))
- void **eventoFilPolyNormals** (wxCommandEvent &WXUNUSED(event))
- void **eventoFilPolyDeform** (wxCommandEvent &WXUNUSED(event))
- void **eventoSnapshot3D** (wxCommandEvent &WXUNUSED(event))
- void **eventoSnapshotAxial** (wxCommandEvent &WXUNUSED(event))
- void **eventoSnapshotSagital** (wxCommandEvent &WXUNUSED(event))
- void **eventoSnapshotCoronal** (wxCommandEvent &WXUNUSED(event))
- void **eventoParImage** (wxCommandEvent &WXUNUSED(event))
- void **eventoParPolygon** (wxCommandEvent &WXUNUSED(event))
- void **eventoParVideo** (wxCommandEvent &WXUNUSED(event))
- void **eventoLanguage** (wxCommandEvent &WXUNUSED(event))
- wxAuiNotebook * **getNkNotebook** (void)
- void **eventoActivarJoystick** (wxCommandEvent &WXUNUSED(event))
- void **eventoCameraPos** (wxCommandEvent &WXUNUSED(event))
- void **eventoNavEndoscope** (wxCommandEvent &WXUNUSED(event))
- void **eventoFPS** (wxCommandEvent &WXUNUSED(event))

Detailed Description

Main window.

Gui implementation

Definition at line 64 of file nkNukak3D.h.

Member Enumeration Documentation

anonymous enum

Event identifier.

Enumerator:

ID_ABRIR_ARCHIVO Open file.

ID_ABRIR_ARCHIVO_DICOM Open stack of image Dicom.

ID_ABRIR_ARCHIVO_MALLA3D Open object 3D.

ID_ABRIR_ARCHIVO_VOL Open file vol.

ID_ACERCA_DE Show Dialog About Nukak3d.

ID_ACERCA_DE_MAC Show Dialog About Nukak3d (Only for Mac) .

ID_ARBOL Event launch by nkToolBarMac.

ID_AREA Calc area .

ID_BOUNDINGBOX Show/hide bounding box.

ID_BOXWIDGET Show/hide box widget.

ID_CAMERAPOS Mostrar posiciones de la camara.

ID_CAMPLANES Actualizar planos con posicion de la camara.

ID_CERRAR Close application.

ID_CERRAR_TODO Close application.

ID_COLDET Collision detection.

ID_ENDOCAMOB Habilitar el endoscopio virtual.

ID_ENDOCAM Enable Virtual endoscopy.

ID_FILPOLYDECIMATE To reduce numbers of polygon.

ID_FILPOLYDEFORM Deform Mesh.

ID_FILPOLYNORMALS Recalc normals of faces.

ID_FILPOLYSMOOTH Smooth mesh.

ID_FILPOLYTRIANGLE Triangle mesh.

ID_FILVOLGAUSSIAN Gaussian filter.

ID_FILVOLGRADIENT Gradient filter.

ID_FILVOLMEDIAN Median filter.

ID_FILVOLTHRESHOLD Threshold filter.

ID_GUARDARMALLA3D Save object 3D.

ID_GUARDARVOL Save vol.

ID_JOYSTICK Input device to Joystick.

ID_LSLEVELSETSCOMPLETO Level sets.

ID_MARCHING_CUBES Surface reconstruction with Marching Cubes.

ID_NAVENDOSCOPE Estilo de navegacion de la camara como endoscopio.

ID_NAVFLIGHT Flight Camera.

ID_NAVJOYSTICK Joystick Camera.

ID_NAVRESET Reset camera position and orientation.

ID_NAVTRACKBALL Trackball Camera.

ID_NAVUNICAM Unicam Camera.

ID_PALETA_COLOR lookup table.

ID_PARIMAGE Image information.

ID_PARPOLYGON Object 3D information.

ID_PARVIDEO VideoCard information.

ID_REINICIAR_PALETA Reset window and level.

ID_SALIR Close application.

ID_SETLANGUAGE Change user language.

ID_SNAPSHOT3D Snapshot canvas 3D.

ID_SNAPSHOTAXIAL Snapshot axial view.

ID_SNAPSHOTCORONAL Snapshot coronal view.

ID_SNAPSHOTSAGITAL Snapshot sagittal view.

ID_STACTIVO Enable stereoscopic vision.

ID_STAUMENTAR Stereoscopic vision more separation.

ID_STDISMINUIR Stereoscopic vision less separation.

ID_STPASIVO Activar desactivar visualizacion estereoscopica.

ID_VOLVIEWER_RENDERING_ESCALAR Ortogonal planes view.

ID_VOLVIEWER_RENDERING_MRC_MIP Ray Tracing MIP.

ID_VOLVIEWER_RENDERING_MRC_COMP Ray Tracing COMPOSITE.

ID_VOLVIEWER_RENDERING_MRC_ISO Ray Tracing ISOSURFACE.

ID_VOLVIEWER_RENDERING_TEXTURA Texture mpping rendering.

ID_FPS Frames per second.

ID_ULTIMO Event's for lookup table.

Definition at line 70 of file nkNukak3D.h.

Constructor & Destructor Documentation

nkNukak3D (*wxWindow* * *parent*, int *id* = -1, const *wxString* & *title* = "Nukak3D", const *wxPoint* & *pos* = *wxDefaultPosition*, const *wxSize* & *size* = *wxDefaultSize*, long *style* = *wxDEFAULT_FRAME_STYLE*)

Class constructor.

Main window.

~nkNukak3D ()

Class destructor.

Member Function Documentation

void insertarToolBar (*wxWindow* * *window*, *wxString* *un_nombre*, *wxString* *una_etiqueta*)

Insert Toolbar Botton.

Parameters:

window nkToolBar to insert.

un_nombre nkToolBar title.

una_etiqueta Label for this control.

void eventoAbrirVolumen (*wxCommandEvent* & *WXUNUSED(event)*)

Open volume of images store in unique file.

void eventoAbrirVolumenDicom (*wxCommandEvent* & *WXUNUSED(event)*)

Open Dicom directories.

void eventoAbrirMalla3D (*wxCommandEvent* & *WXUNUSED(event)*)

Open object 3D (vtk structured grid).

void eventoAcercaDe (*wxCommandEvent* & *WXUNUSED(event)*)

Open about **nkNukak3D**.

void eventoAcercaDeMAC (*wxCommandEvent* & *WXUNUSED(event)*)

Open about **nkNukak3D** for Mac.

void eventoArbol (wxTreeEvent & event)

.nkToolbar event's for Mac and unix systems.

void eventoGuardarVol (wxCommandEvent & WXUNUSED(event))

Save volume.

void eventoGuardarMalla3D (wxCommandEvent & WXUNUSED(event))

Save object 3D in vtk structured grid file.

void eventoBoundingBox (wxCommandEvent & WXUNUSED(event))

Show/hide bounding box.

void eventoBoxWidget (wxCommandEvent & WXUNUSED(event))

Show/hide box widget.

void eventoPaletaColor (wxCommandEvent & event)

Change lookup table for rendering volume.

void eventoReiniciarPaleta (wxCommandEvent & WXUNUSED(event))

Reset window and level.

void eventoSalir (wxCommandEvent & WXUNUSED(event))

Close application.

void eventoVolViewerRenderingEscalar (wxCommandEvent & WXUNUSED(event))

View ortogonal planes rendering.

void eventoVolViewerRenderingTextura (wxCommandEvent & WXUNUSED(event))

Texture mapping rendering.

void eventoVolViewerRenderingMRCmip (wxCommandEvent & WXUNUSED(event))

Visualiza el volumen 3D usando el algoritmo ray casting MIP - Maximum Intensity Projection. La opacidad se cambia variando la ventana (width and level) de la imagen.

void eventoVolViewerRenderingMRCcomp (wxCommandEvent & WXUNUSED(event))

Visualiza el volumen 3D usando el algoritmo ray casting. COMPOSITE La opacidad se cambia variando la ventana (width and level) de la imagen.

void eventoVolViewerRenderingMRCiso (wxCommandEvent & WXUNUSED(event))

Visualiza el volumen 3D usando el algoritmo ray casting. ISOSURFACE La opacidad se cambia variando la ventana (width and level) de la imagen.

void eventoMarchingCubes (wxCommandEvent & WXUNUSED(event))

Marching cubes event.

void eventoIsLevelsetsCompleto (wxCommandEvent & WXUNUSED(event))

Segmentation with levelsets.

void eventoArea (wxCommandEvent & WXUNUSED(event))

Event for calc area.

void eventoNavResetCamara (wxCommandEvent & WXUNUSED(event))

Reset position and orientatio camera.

void eventoNavTrackball (wxCommandEvent & WXUNUSED(event))

Trackball camera.

Navigation by default.

void eventoNavJoystick (wxCommandEvent & WXUNUSED(event))

Joystick camera.

void eventoNavFlight (wxCommandEvent & WXUNUSED(event))

Flight camera.

void eventoNavUnicam (wxCommandEvent & WXUNUSED(event))

Unicam camera.

void eventoStActivo (wxCommandEvent & WXUNUSED(event))

Enable/Disable stereoscopic vision.

void eventoStPasivo (wxCommandEvent & WXUNUSED(event))

Enable/Disable passive stereo.

void eventoStAumentar (wxCommandEvent & WXUNUSED(event))

More separation for images in stereoscopic vision.

void eventoStDisminuir (wxCommandEvent & WXUNUSED(event))

Less separation for images in stereoscopic vision.

void eventoFilVolGaussian (wxCommandEvent & WXUNUSED(event))

Gaussian filter.

void eventoFilVolMedian (wxCommandEvent & WXUNUSED(event))

Median filter.

void eventoFilVolGradient (wxCommandEvent & WXUNUSED(event))

Gradient filter.

void eventoFilVolThreshold (wxCommandEvent & WXUNUSED(event))

Threshold filter.

void eventoFilPolyTriangle (wxCommandEvent & WXUNUSED(event))

Triangle mesh.

void eventoFilPolyDecimate (wxCommandEvent & WXUNUSED(event))

Decimate mesh.

void eventoFilPolySmooth (wxCommandEvent & *WXUNUSED*(event))

Smooth mesh.

void eventoFilPolyNormals (wxCommandEvent & *WXUNUSED*(event))

Recalc normals.

void eventoFilPolyDeform (wxCommandEvent & *WXUNUSED*(event))

Deform mesh.

void eventoSnapshot3D (wxCommandEvent & *WXUNUSED*(event))

Snapshot 3d view.

void eventoSnapshotAxial (wxCommandEvent & *WXUNUSED*(event))

Snapshot axial view.

void eventoSnapshotSagital (wxCommandEvent & *WXUNUSED*(event))

Snapshot axial sagital.

void eventoSnapshotCoronal (wxCommandEvent & *WXUNUSED*(event))

Snapshot axial coronal.

void eventoParImage (wxCommandEvent & *WXUNUSED*(event))

Show information of volume.

void eventoParPolygon (wxCommandEvent & *WXUNUSED*(event))

Show information of mesh.

void eventoParVideo (wxCommandEvent & *WXUNUSED*(event))

Show information of video card.

void eventoLanguage (wxCommandEvent & *WXUNUSED*(event))

Change the user preferences, language.

wxAuiNotebook* getNkNotebook (void)

Get notebok to make other pages.

Returns:

wxAuiNotebook *

void eventoActivarJoystick (wxCommandEvent & WXUNUSED(event))

Activa un joystick/gamepad para navegación.

void eventoCameraPos (wxCommandEvent & WXUNUSED(event))

Mostrar/guardar posiciones de la camara.

void eventoNavEndoscope (wxCommandEvent & WXUNUSED(event))

Navegación tipo endoscopio.

Modo de navegación tipo endoscopio

void eventoFPS (wxCommandEvent & WXUNUSED(event))

Frames per second.

Muestra los cuadros por segundo del render

The documentation for this class was generated from the following file:

- **nkNukak3D.h**

nkObj3DViewer Class Reference

Class for view mesh.

```
#include <nkObj3DViewer.h>
```

Public Member Functions

- **nkObj3DViewer** (wxWindow *parent, wxWindowID id=wxID_ANY, const wxPoint &pos=wxDefaultPosition, const wxSize &size=wxDefaultSize, long style=wxTAB_TRAVERSAL|wxBORDER_NONE, const wxString &name="nkObj3DViewer")
- **~nkObj3DViewer** ()
- void **Configurar** (void)
- void **abrirArchivo** (wxString nombreArchivo)
- void **guardarArchivo** (wxString nombreArchivo)
- void **configurarMalla3D** (vtkPolyData *input)
- void **BoundingBox** (void)
- void **BoundingBoxOnOff** (void)
- void **imagenAIsoSurface** (itk::Image< unsigned short, 3 >::Pointer una_imagen, int un_numContornos=20, int un_umbral_inferior=0, int un_umbral_superior=100, double un_rojo=1.0, double un_verde=1.0, double un_azul=1.0, double una_opacidad=1.0)
- void **StActivo** (void)
- void **StPasivo** (void)
- void **StAumentar** (void)
- void **StDisminuir** (void)
- void **NavResetCamara** (void)
- void **NavTrackball** (void)
- void **NavJoystick** (void)
- void **NavFlight** (void)
- void **NavUnicam** (void)
- void **PolyTriangle** (void)
- void **PolyDecimate** (void)
- void **PolySmooth** (void)
- void **PolyNormals** (void)
- void **PolyDeform** (void)
- vtkWindowToImageFilter * **Snapshot** (void)
- vtkPolyData * **GetPolyData** (void)
- wxString **VideoCard** (void)
- void **FPS** (void)

Friends

- class **nkObj3DViewer::FpsChange**

Classes

- class **FpsChange**
Clase para monitorear los cuadros por segundo.

Detailed Description

Class for view mesh.

Definition at line 70 of file nkObj3DViewer.h.

Constructor & Destructor Documentation

nkObj3DViewer (*wxWindow* * *parent*, *wxWindowID* *id* = *wxID_ANY*, *const wxPoint* & *pos* = *wxDefaultPosition*, *const wxSize* & *size* = *wxDefaultSize*, *long* *style* = *wxTAB_TRAVERSAL|wxBORDER_NONE*, *const wxString* & *name* = "nkObj3DViewer")

Class constructor.

~nkObj3DViewer ()

Class destructor.

Member Function Documentation

void Configurar (*void*)

Config view.

void abrirArchivo (*wxString* *nombreArchivo*)

Open file.

Parameters:

nombreArchivo Filepath of mesh.

void guardarArchivo (*wxString* *nombreArchivo*)

Save mesh.

Parameters:

nombreArchivo Filepath of file.

void configurarMalla3D (*vtkPolyData* * *input*)

Config view 3d.

Parameters:

input Object to view.

void BoundingBox (void)

Bounding box de la imagen 3D.

void BoundingBoxOnOff (void)

Show/hide Bounding box.

void imagenAlsoSurface (itk::Image< unsigned short, 3 >::Pointer *una_imagen*, int *un_numContornos* = 20, int *un_umbral_inferior* = 0, int *un_umbral_superior* = 100, double *un_rojo* = 1.0, double *un_verde* = 1.0, double *un_azul* = 1.0, double *una_opacidad* = 1.0)

Marching cubes function.

Parameters:

una_imagen Volume to transform.

un_numContornos Numbers of contours.

un_umbral_inferior

un_umbral_superior

un_rojo

un_verde

un_azul

una_opacidad

void StActivo (void)

Enable/Diable stereoscopy vision.

void StPasivo (void)

Enable/Diable passive stereo.

void StAumentar (void)

More separation of images in stereoscopy vision.

void StDisminuir (void)

Less separation of images in stereoscopy vision.

void NavResetCamara (void)

Reset position and orientation of camera.

void NavTrackball (void)

Trackball camera.

void NavJoystick (void)

Joystick camera.

void NavFlight (void)

Flight camera.

void NavUnicam (void)

unicam camera.

void PolyTriangle (void)

Triangle mesh.

void PolyDecimate (void)

Decimate mesh.

void PolySmooth (void)

Smooth mesh.

void PolyNormals (void)

Recalc normals.

void PolyDeform (void)

Deform mesh.

vtkWindowToImageFilter* Snapshot (void)

Snapshot view.

vtkPolyData* GetPolyData (void)

Get polydata.

Returns:

vtkPolyData of objet in view 3D.

wxString VideoCard (void)

Video card information.

Returns:

wxString

void FPS (void)

Frames per second.

Returns:

Muestra los cuadros por segundo

Friends And Related Function Documentation

friend class nkObj3DViewer::FpsChange [friend]

Definition at line 97 of file nkObj3DViewer.h.

The documentation for this class was generated from the following file:

- **nkObj3DViewer.h**

nkTool Class Reference

Item of menu.

```
#include <nkToolBar.h>
```

Public Member Functions

- **nkTool** (int *toolId*, const wxString &*label*, const wxBitmap &*bitmap1*, const wxString &*shortHelpString*="", wxItemKind *kind*=wxITEM_NORMAL)
- **~nkTool** ()
- wxToolBarToolBase * **getTool** (wxToolBar **un_tool*)
- **nkTool** (int *toolId*, const wxString &*label*, const wxBitmap &*bitmap1*, const wxString &*shortHelpString*="", wxItemKind *kind*=wxITEM_NORMAL)
- **~nkTool** ()
- wxToolBarToolBase * **getTool** (wxToolBar **un_tool*)

Static Public Attributes

- static wxSize **LARGO_X_ANCHO_ICONO**
-

Detailed Description

Item of menu.

Class for generate item for toolbar.

Definition at line 28 of file nkToolBar.h.

Constructor & Destructor Documentation

nkTool (int *toolId*, const wxString & *label*, const wxBitmap & *bitmap1*, const wxString & *shortHelpString* = "", wxItemKind *kind* = wxITEM_NORMAL)

Class constructor.

~nkTool ()

Class destructor.

nkTool (int *toolId*, const wxString & *label*, const wxBitmap & *bitmap1*, const wxString & *shortHelpString* = "", wxItemKind *kind* = wxITEM_NORMAL)

Class constructor.

~nkTool ()

Class destructor.

Member Function Documentation

wxToolBarToolBase* getTool (wxToolBar * *un_tool*)

Generation and insertion of tool in wxToolBar.

Parameters:

un_tool wxToolBar to insert.

wxToolBarToolBase* getTool (wxToolBar * *un_tool*)

Generation and insertion of tool in wxToolBar.

Parameters:

un_tool wxToolBar to insert.

Member Data Documentation

static wxSize LARGO_X_ANCHO_ICONO [static]

Size: Width and Height of item of menu.

Definition at line 50 of file nkToolBar.h.

The documentation for this class was generated from the following files:

- **nkToolBar.h**
- **nkToolBarMac.h**

nkToolBar Class Reference

Toolbar for Menus.

```
#include <nkToolBar.h>
```

Public Member Functions

- **nkToolBar** (wxWindow *parent, wxWindowID id=-1, const wxPoint &pos=wxDefaultPosition, const wxSize &size=wxDefaultSize, long style=wxHSCROLL|wxVSCROLL, const wxString &name="scrolledWindow")
- **~nkToolBar** (void)
- **nkMenuTool * insertarMenu** (long id, const wxString &nombreMenu="Menu")
- **nkMenuTool * obtenerMenu** (long id)
- void **desplegarMenu** (nkMenuTool *un_menu)
- void **replegarMenu** (nkMenuTool *un_menu)
- void **replegarMenus** (void)
- int **alto** (void)
- void **evtRedimensionar** (wxSizeEvent &p_Event)
- void **evtRepintar** (wxPaintEvent &WXUNUSED(evt))
- **nkToolBar** (wxWindow *parent, wxWindowID id=-1, const wxPoint &pos=wxDefaultPosition, const wxSize &size=wxDefaultSize, long style=wxTR_HAS_BUTTONS|wxTR_HIDE_ROOT|wxTR_FULL_ROW_HIGHLIGHT, const wxString &name="scrolledWindow")
- **~nkToolBar** (void)
- **nkMenuTool * insertarMenu** (long id, const wxString &nombreMenu="Menu")
- void **desplegarMenu** (nkMenuTool *un_menu)
- void **replegarMenu** (nkMenuTool *un_menu)
- void **replegarMenus** (void)

Static Public Attributes

- static int **ALINEACION**

Detailed Description

Toolbar for Menus.

Definition at line 173 of file nkToolBar.h.

Constructor & Destructor Documentation

nkToolBar (wxWindow * parent, wxWindowID id = -1, const wxPoint & pos = wxDefaultPosition, const wxSize & size = wxDefaultSize, long style = wxHSCROLL | wxVSCROLL, const wxString & name = "scrolledWindow")

Class constructor.

~nkToolBar (void)

Class destructor.

nkToolBar (wxWindow * parent, wxWindowID id = -1, const wxPoint & pos = wxDefaultPosition, const wxSize & size = wxDefaultSize, long style = wxTR_HAS_BUTTONS | wxTR_HIDE_ROOT | wxTR_FULL_ROW_HIGHLIGHT, const wxString & name = "scrolledWindow")

Class constructor.

~nkToolBar (void)

Class destructor.

Member Function Documentation

nkMenuTool* insertarMenu (long id, const wxString & nombreMenu = "Menu")

Procedure for create menu.

Parameters:

id for this control.

nombreMenu label for this control.

nkMenuTool* obtenerMenu (long id)

Function that return **nkMenuTool** item of list.

Parameters:

id key identifier in the list.

void desplegarMenu (nkMenuTool * un_menu)

Function for dropdown menu.

Parameters:

un_menu for dropdown.

void replegarMenu (nkMenuTool * un_menu)

Function for hide items of menu.

Parameters:

un_menu to hide.

void replegarMenus (void)

Func for hide all items of all menus.

int alto (void)

Function to calc height of this toolbar.

void evtRedimensionar (wxSizeEvent & p_Event)

Function manager for event EVT_SIZE.

void evtRepintar (wxPaintEvent & WXUNUSED(evt))

Function for paint all menus.

Function that paint and put menus.

nkMenuTool* insertarMenu (long id, const wxString & nombreMenu = "Menu")

Procedure for create menu.

Parameters:

id for this control.

nombreMenu label for this control.

void desplegarMenu (nkMenuTool * un_menu)

Function for dropdown menu.

Parameters:

un_menu for dropdown.

void replegarMenu (nkMenuTool * un_menu)

Function for hide items of menu.

Parameters:

un_menu to hide.

void replegarMenus (void)

Func for hide all items of all menus.

Member Data Documentation

static int ALINEACION [*static*]

Margins size for this control.

Definition at line 176 of file nkToolBar.h.

The documentation for this class was generated from the following files:

- **nkToolBar.h**
- **nkToolBarMac.h**

nkVolViewer Class Reference

Class for view volume 3D.

```
#include <nkVolViewer.h>
```

Public Member Functions

- **nkVolViewer** (wxWindow *parent, wxWindowID id=wxID_ANY, const wxPoint &pos=wxDefaultPosition, const wxSize &size=wxDefaultSize, long style=wxTAB_TRAVERSAL|wxBORDER_NONE, const wxString &name="nkVolViewer")
- **~nkVolViewer** ()
- void **setNombreArchivo** (wxString nombreArchivo)
- wxString **getNombreArchivo** (void)
- void **setImagen** (itk::Image< unsigned short, 3 >::Pointer una_imagen)
- itk::Image< unsigned short, 3 >::Pointer **getImagen** (void)
- vtkImageData * **getVtkImagen** (void)
- void **Configurar** (void)
- void **configurarITKimage** (wxString un_nombreArchivo, itk::Image< unsigned short, 3 >::Pointer una_imagen)
- void **abrirArchivo** (wxString nombreArchivo)
- void **abrirArchivo_vol** (wxString nombreArchivo)
- void **abrirArchivo_dicom** (wxString nombreArchivo, wxVtkDICOMImporter *myimporter, int un_index)
- void **guardarArchivo** (wxString nombreArchivo)
- void **BoundingBox** (void)
- void **BoundingBoxOnOff** (void)
- void **BoxWidgetOnOff** (void)
- void **cambiarPaletaColor** (vtkLookupTable *una_paleta)
- void **cambiarFormaDeProcesamiento** (int un_modo, int textura_o_mrc=0)
- void **reiniciarNiveleseDePaleta** (void)
- void **lsLevelsetsCompleto** (wxAuiNotebook *p_libro)
- void **Area** (void)
- double **obtenerValorActualDeContorno** (void)
- void **StActivo** (void)
- void **StPasivo** (void)
- void **StAumentar** (void)
- void **StDisminuir** (void)
- void **NavResetCamara** (void)
- void **NavTrackball** (void)
- void **NavJoystick** (void)
- void **NavFlight** (void)
- void **NavUnicam** (void)
- void **FilVolGaussian** (wxAuiNotebook *p_libro)
- void **FilVolMedian** (wxAuiNotebook *p_libro)
- void **FilVolGradient** (void)
- void **FilVolThreshold** (void)
- vtkWindowToImageFilter * **Snapshot** (int p_screen)
- wxString **VideoCard** (void)
- vtkViewImage3D * **getVista3D** ()
- vtkViewImage2DWithTracer * **getVistaAxial** ()
- vtkViewImage2DWithTracer * **getVistaCoronal** ()
- vtkViewImage2DWithTracer * **getVistaSagital** ()

- void **NuevoLevelSets** (wxAuiNotebook *p_libro)
- void **CameraPos** ()
- void **NavEndoscope** (void)
- void **NavUpdatePlanes** ()
- void **FPS** (void)

Friends

- class **nkVolViewer::nkCameraCallback**
- class **nkVolViewer::FpsChange**

Classes

- class **FpsChange**
Clase para monitorear los cuadros por segundo.
- class **nkCameraCallback**
Clase para monitorear la posición de la cámara.

Detailed Description

Class for view volume 3D.

Definition at line 94 of file nkVolViewer.h.

Constructor & Destructor Documentation

nkVolViewer (wxWindow * *parent*, wxWindowID *id* = wxID_ANY, const wxPoint & *pos* = wxDefaultPosition, const wxSize & *size* = wxDefaultSize, long *style* = wxTAB_TRAVERSAL | wxBORDER_NONE, const wxString & *name* = "nkVolViewer")

Class Constructor.

~nkVolViewer ()

Class destructor.

Member Function Documentation

void setNombreArchivo (wxString *nombreArchivo*)

Set name of file.

Parameters:

nombreArchivo

wxString getNombreArchivo (void)

Get name of file.

Returns:

wxString Name of file.

void setImagen (itk::Image< unsigned short, 3 >::Pointer *una_imagen*)

Set volume.

Parameters:

una_imagen itk::Image<unsigned short,3>::Pointer pointer to image.

itk::Image<unsigned short,3>::Pointer getImagen (void)

Obtener volumen 3D (imagen itk).

Returns:

itk::Image<unsigned short,3>::Pointer apuntador a la imagen

vtkImageData* getVtkImagen (void)

Get volume.

Returns:

vtkImageData* pointer to image.

void Configurar (void)

Configure views.

void configurarITKimage (wxString *un_nombreArchivo*, itk::Image< unsigned short, 3 >::Pointer *una_imagen*)

Configure volume.

Parameters:

un_nombreArchivo wxString Filepath of archive.

una_imagen itk::Image<unsigned short,3>::Pointer pointer to image.

void abrirArchivo (wxString *nombreArchivo*)

Open volumen.

Parameters:

nombreArchivo wxString filepath of archive.

void abrirArchivo_vol (wxString *nombreArchivo*)

Open file of volume 3D in format .vol.

Parameters:

nombreArchivo wxString Filepath of archive.

void abrirArchivo_dicom (wxString *nombreArchivo*, wxVtkDICOMImporter * *myimporter*, int *un_index*)

Open directory Dicom.

Parameters:

nombreArchivo wxString Filepath of archive.
myimporter pointer to wizard for Dicom images.
un_index number of dicom series.

void guardarArchivo (wxString *nombreArchivo*)

Save file.

Parameters:

nombreArchivo wxString Filepath of archive.

void BoundingBox (void)

Bounding box de la imagen 3D.

void BoundingBoxOnOff (void)

Show/hide Bounding box.

void BoxWidgetOnOff (void)

Show/hide Box Widget.

void cambiarPaletaColor (vtkLookupTable * *una_paleta*)

Change Lookup Table.

Parameters:

una_paleta vtkLookupTable* Lookup Table to change.

void cambiarFormaDeProcesamiento (int *un_modo*, int *textura_o_mrc* = 0)

Change rendering mode.

Parameters:

un_modo Mode of rendering

textura_o_mrc If mode of rendering is texture choose texture mapping or ray cast.

void reiniciarNiveleseDePaleta (void)

Reset Look Up Table.

void lsLevelsetsCompleto (wxAuiNotebook * *p_libro*)

Sementation with levelsets.

Parameters:

p_libro wxAuiNotebook* for make pages.

void Area (void)

Calc area.

double obtenerValorActualDeContorno (void)

Get value of select voxel.

Returns:

double value of voxel.

void StActivo (void)

Enable/Disable Stereoscopy vision.

void StPasivo (void)

Enable/Disable passive stereo.

void StAumentar (void)

More distance between image in Stereoscopy vision.

void StDisminuir (void)

Less distance between image in Stereoscopy vision.

void NavResetCamara (void)

Reset position and orientation of camera.

void NavTrackball (void)

Tracball camera.

void NavJoystick (void)

Joystick Camera.

void NavFlight (void)

Flight camera.

void NavUnicam (void)

Unicam camera.

void FilVolGaussian (wxAuiNotebook * *p_libro*)

Gaussian filter.

Parameters:

p_libro wxAuiNotebook* for make pages.

void FilVolMedian (wxAuiNotebook * *p_libro*)

Median filter.

Parameters:

p_libro wxAuiNotebook* for make pages.

void FilVolGradient (void)

Gradient filter.

Warning:

Not define.

void FilVolThreshold (void)

Threshold filter.

Warning:

Not define.

vtkWindowToImageFilter* Snapshot (int *p_screen*)

Capture Screen.

Parameters:

p_screen Choose view (3d, axial, coronal, sagital).

wxString VideoCard (void)

Video card information.

Returns:

wxString.

vtkViewImage3D* getView3D () [inline]

Definition at line 405 of file nkVolViewer.h.vtkViewImage2DWithTracer* getViewAxial () [inline]

Definition at line 409 of file nkVolViewer.h.vtkViewImage2DWithTracer* getViewCoronal () [inline]

Definition at line 412 of file nkVolViewer.h.vtkViewImage2DWithTracer* getViewSagital () [inline]

Definition at line 415 of file nkVolViewer.h.void NuevoLevelSets (wxAuiNotebook * *p_libro*)

void CameraPos ()

Mostrar/guardar posiciones de la camara.

void NavEndoscope (void)

Mover solo hacia atras.

void NavUpdatePlanes ()

Actualizar los planos ortogonales con la posicion de la camara.

void FPS (void)

Frames per second.

Returns:

Muestra los cuadros por segundo

Friends And Related Function Documentation

friend class nkVolViewer::nkCameraCallback [*friend*]

Definition at line 161 of file nkVolViewer.h.friend class nkVolViewer::FpsChange [*friend*]

Definition at line 187 of file nkVolViewer.h.

The documentation for this class was generated from the following file:

- **nkVolViewer.h**

nukak3d File Documentation

nkAcercaDe.h File Reference

About Nukak3D.

Classes

- class **nkAcercaDe**
About Dialog.

Detailed Description

About Nukak3D.

Author:

Alexander Pinzon Fernandez.

Version:

0.1

Date:

12/02/2007 03:52 p.m.

Definition in file **nkAcercaDe.h**.

nkInteractorStyleEndoCamera.h File Reference

Class for Endoscopy Simulator.

Classes

- class **nkInteractorStyleEndoCamera**

Defines

- #define **mensajes** 1
 - #define **VTKIS_ROTENDO** 10
-

Detailed Description

Class for Endoscopy Simulator.

Implement all functions for Endoscopy Simulator.

Author:

Byron Pérez

Version:

0.1

Date:

01/07/2008 03:15 p.m.

Definition in file **nkInteractorStyleEndoCamera.h**.

Define Documentation

#define mensajes 1

Definition at line 24 of file nkInteractorStyleEndoCamera.h.**#define VTKIS_ROTENDO** 10

Definition at line 25 of file nkInteractorStyleEndoCamera.h.

nkIODialog.h File Reference

Generic dialog for input data.

Classes

- class **nkIODialog**
Generic dialog for input data.

Detailed Description

Generic dialog for input data.

Author:

Byron Pérez, Alexander Pinzon

Version:

0.3

Date:

27/12/2007 03:37 p.m.

Definition in file **nkIODialog.h**.

nkLevelSets.h File Reference

Class for Level Sets segmentation wizard.

Classes

- class **nkLevelSets**
Class for Level Sets Segmentation.

 - class **nkLevelSetsPageGradient**
 - class **nkLevelSetsPageSigmoid**
 - class **nkLevelSetsPageSeeds**
-

Detailed Description

Class for Level Sets segmentation wizard.

Implement all functions for level sets process.

Author:

Alexander Pinzón Fernandez, Byron Pérez

Version:

0.1

Date:

27/06/2008 03:15 p.m.

Definition in file **nkLevelSets.h**.

nkMain.h File Reference

nukak3d Application.

Classes

- class **nkMain**
nukak3d Application.

Detailed Description

nukak3d Application.

Author:

Alexander Pinzon Fernandez.

Version:

0.1

Date:

18/10/2007 02:50 p.m.

Definition in file **nkMain.h**.

nkNukak3D.h File Reference

Main window.

Classes

- class **nkNukak3D**
Main window.

Defines

- `#define mensajes 1`
-

Detailed Description

Main window.

Gui implementation

Author:

Alexander Pinzón Fernandez, Byron Pérez

Version:

0.2

Date:

27/12/2007 03:37 p.m.

Definition in file **nkNukak3D.h**.

Define Documentation

#define mensajes 1

nk

Definition at line 58 of file nkNukak3D.h.

nkObj3DViewer.h File Reference

Class for view mesh.

Classes

- class **nkObj3DViewer**
Class for view mesh.

- class **nkObj3DViewer::FpsChange**
Clase para monitorear los cuadros por segundo.

Defines

- `#define mensajes 1`
-

Detailed Description

Class for view mesh.

Author:

Alexander Pinzón Fernandez, Byron Pérez

Version:

0.2

Date:

27/12/2007 03:37 p.m.

Definition in file **nkObj3DViewer.h**.

Define Documentation

#define mensajes 1

nk

Definition at line 65 of file nkObj3DViewer.h.

nkToolBar.h File Reference

Toolbar of nukak3d.

Classes

- class **nkTool**
Item of menu.

- class **nkMenuTool**
Menu of items.

- class **nkToolBar**
Toolbar for Menus.

Functions

- **WX_DECLARE_LIST** (**nkTool**, nkListaTool)
- **WX_DECLARE_LIST** (**nkMenuTool**, nkListaMenu)

Detailed Description

Toolbar of nukak3d.

Author:

Alexander Pinzon Fernandez.

Version:

0.1

Date:

18/10/2007 02:50 p.m.

Definition in file **nkToolBar.h**.

Function Documentation

WX_DECLARE_LIST (**nkMenuTool**, nkListaMenu)

Declaration of list of **nkMenuTool**.

WX_DECLARE_LIST (**nkTool**, nkListaTool)

List of **nkTool** declaration.

nkToolBarMac.h File Reference

Classes

- class **nkTool**
Item of menu.

- class **nkMenuTool**
Menu of items.

- class **nkToolBar**
Toolbar for Menus.

nkVolViewer.h File Reference

Class for view volume 3D.

Classes

- class **nkVolViewer**
Class for view volume 3D.

- class **nkVolViewer::nkCameraCallback**
Clase para monitorear la posición de la cámara.

- class **nkVolViewer::FpsChange**
Clase para monitorear los cuadros por segundo.

Defines

- `#define mensajes 1`
-

Detailed Description

Class for view volume 3D.

Implement all functions for manage image.

Author:

Alexander Pinzón Fernandez, Byron Pérez

Version:

0.2

Date:

27/12/2007 03:37 p.m.

Definition in file **nkVolViewer.h**.

Define Documentation

#define mensajes 1

STL

Definition at line 89 of file nkVolViewer.h.

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